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ABSTRACT

This paper describes the initial efforts of the New American Schools Development Corporation (NASDC), a private, nonprofit corporation created as part of the American 2000 initiative to fund the development of new designs for American schools. NASDC is currently funding nine teams to develop and demonstrate designs for high-performing schools. This paper describes results of an evaluation of the nine design teams and their respective sites. It provides baseline information about the designs and how they developed from concepts to demonstrations in real schools. It also describes the initial NASDC efforts, compares and contrasts the nine different designs and their demonstration strategies, and describes the sites that have become partners with the nine design teams. Data were collected through site visits and interviews with participants. Also, proposals, design documents, and interim reports were reviewed. The teams' proposals varied in four different ways--by the scope of the design and its required collaborators, the chosen demonstration strategy, readiness factors, and site choices. Those teams with core focus designs, a team specification-and-development approach, a strong indication of readiness, and a modest number of sites are more likely to be successful. Two teams fit this description--the Audrey Cohen College System of Education (implemented at schools in Phoenix and San Diego), and Roots and Wings (at St. Mary's County, Maryland). Nine figures and four tables are included. Contains 12 references. (LMI)

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Designing New American Schools: Baseline Observations on Nine Design Teams

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DRU-680-1-NASDC

February 1995

Prepared for New American Schools Development Corporation

Institute on Education and Training

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PREFACE

This report is an analytic description of the initial efforts of the New American Schools Development Corporation (NASDC), a private non-profit corporation created as part of the America 2000 initiative to fund the development of new designs for American schools. Currently, NASDC is funding nine teams to develop and demonstrate designs for high performing schools.

NASDC asked RAND to be the analytical arm of its efforts at school reform. In particular, it gave RAND four tasks:

- Analyze the experiences of the design teams as they develop and demonstrate their designs in real schools and distill lessons for both future implementors of these designs and future designers of new designs.
- Monitor and ultimately synthesize the design team's efforts to provide evidence of the initial impact of each design.
- Assess the costs of implementing each design for potential adopters.
- Identify systemic barriers to the scale-up of NASDC supported designs.

This report describes the initial NASDC efforts, compares and contrasts the nine different designs and their demonstration strategies, and describes the sites that have become partners with the nine design teams. The descriptions represent a baseline for the design teams' efforts.

This report and subsequent ones on the demonstration experience should interest educational policy makers at all levels of government, school administrators and teachers, and communities concerned with improved schooling.

The research was supported by NASDC. The study was conducted in the Education and Human Resources Program of the Domestic Research Division of RAND.

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SUMMARY

The New American School Development Corporation (NASDC) was established to develop "break the mold" schools. NASDC is currently funding an effort to promote assistance organizations that design and develop high-performing schools. In 1991, NASDC solicited designs for such schools from independent groups through a request-for-proposal (RFP) process. Eleven teams, later reduced to nine teams, were chosen to both design and demonstrate their concepts in real schools over a three-year time span, from 1993 through 1995. NASDC asked RAND to study the development and demonstration phase of the nine design teams and their respective sites in order to inform the public about what schools can expect as they implement NASDC designs and to identify systemic barriers to the change process in schools.

PURPOSE

This report, the first in a series, provides baseline information about the designs to be used by RAND to understand how the designs subsequently developed and evolved from concepts to demonstrations in real schools. This initial report addresses several questions:

- What are the principal elements of the designs and how do the designs compare and contrast on these elements?
- What approaches are being used to develop the designs?
- What factors might affect the teams' ability to demonstrate their designs?
- What are the implications of these differences in design and design teams for the outcomes to be expected in the design and demonstration phase?

METHOD

To construct a baseline, RAND used several sources. The research team reviewed all proposals, design documents, and interim reports submitted to NASDC by the design teams. Staff members also made at

least one visit to each of the teams during the design phase of the projects. In summer 1993, RAND staff attended the various summer institutes and staff development meetings held by all the design teams except one. In fall 1993 and spring 1994, teams of two staff members visited each design team and at least two sites where each team's design was being implemented. Interviews were conducted with district officials, school principals, key design-related site personnel, teachers, and, when possible, parents and business partners. The information in this report is derived from these interviews and document review.

SCHOOL DESIGN TEAMS

Brief sketches follow of the nine design teams NASDC chose to demonstrate their designs. For a more complete description, see Appendix A.

Audrey Cohen College System of Education (EC). A holistic and purpose-driven curriculum is the centerpiece of the design. This interdisciplinary, applied learning curriculum focuses on the purposes of learning and leads students through a series of constructive social actions. All associated activities in the school change to support the learning purposes. For grades K-12.

Authentic Teaching, Learning, and Assessment of All Students (ATLAS). The design requires a participatory governance structure focused on a K-12 feeder pattern (pathway). While it has strong principles of interdisciplinary curriculum and instruction, the unique focus is on the consensus building governance needed to lead away from fragmented, bureaucratic learning environments to unified support for a community of learners. For grades K-12.

Community Learning Centers (CLC). The design requires that schools have an "institutional bypass" from the current system of regulations that bind school level improvement. The core of the school is individualized instruction with continuous assessment of student and school progress. The school becomes the community center for education, social, and health services. For grades K-12.

Co-NECT (CON). School-based design teams tailor a generic design to meet local needs. With district and community support, the local design is implemented, and continuously refined, by teams of empowered, accountable teachers. Modern technology, featuring desktop Internet participation, supports a project-based curriculum and continuous assessment of school and student progress. For grades K-12.

Expeditionary Learning (EL). Dedicated to complete development of students and teachers by extending the values of Outward Bound into schools, the curriculum and instruction move toward expeditions of learning intended to develop intellectual, physical, and civic sides of students. Teachers become guides and are provided continuous, innovative professional development. For grades K-12.

Los Angeles Learning Center (LALC). A unique partnership of the district, teachers' union, universities, businesses, and community groups to overcome urban distress and jointly build a school of the future dedicated to individual support. Emphasis is placed on strong social support for students from school and community members. For grades K-12.

Modern Red School House (MRSH). The design blends elements of traditional education with new instructional methods to provide all students with a strong foundation in American culture as well as skills needed for future employment. For grades K-12.

National Alliance for the Restructuring of Education (NA). An alliance of states, districts, schools, and expert organizations created to effect system change at all levels by promoting ambitious standards and accountability mechanisms. The design focuses on outcomes-based governance with decentralized decisionmaking and the provision of strong professional support to teachers and schools. For grades K-12.

Roots and Wings (RW). A relentless and organized approach to ensuring all children will leave elementary schools with skills required for success. The design reallocates existing federal, state, and local resources into a system of curriculum, instruction, and family support designed to eliminate special education and low achievement. For grades K-6.

DESIGN AND DESIGN TEAM COMPARISONS

The designs and teams differed in many details, but we found at a macro-level that there were four fundamental differences among teams: the scope of the design and needed collaborators, the demonstration strategy chosen, the readiness of the team for demonstration, and the selection of sites.

Design Characteristics

Designs differed in their breadth of coverage, difficulty of changes to elements covered, and needed collaboration to demonstrate the design. Three approaches distinguish the design teams as well as form expectations about the relative likelihood of meeting NASDC goals of full demonstration at the end of the design and demonstration phase.

Core focus designs (AC, CON, EL, and RW) emphasize changes in seven elements associated with the core of schooling: curriculum, instruction, standards, assessments, student groupings, community involvement, and professional development. They focus on school level partnerships--it is their main point of entry and continued interaction.

Comprehensive designs (AT, CLC, LALC, MRSH) emphasize more elements, including integrated social services, governance changes, and organization and staffing changes as fundamental to the design. These latter elements are intended to indirectly affect the schools over time. While these teams believe that they need to construct complex collaborative efforts with groups outside of schools to accomplish these goals, their main interventions are still at the school-building level.

The sole **systemic** design (NA) emphasizes changes to all elements and the need for collaboration among many partners. Rather than focus on the school as the intervention point, this design focuses on changing the systems that surround schools including the central office, state legislation, professional development providers, social services providers, and the community.

We would expect that comprehensive and systemic designs would face greater challenges than the core focus designs in terms of meeting the Phase 2 goals of NASDC. A combination of focusing on more elements, emphasizing elements with greater difficulties for short-term change,

and needing to manage a greater number of external collaborations or partnerships, presents obvious challenges to these teams.

Development Approaches

The teams have different development strategies that will likely affect the demonstration experience.

Team Specified and Developed: One group of teams, including AC and RW, is heavily reliant on the capabilities of the design teams to further specify and develop the design. Although they work with schools to further develop the designs, these teams take responsibility for providing the curriculum frameworks, models of lessons plans, list of resources, models for student assignment, and assessments in keeping with the specific elements of the design.

Locally Specified and Developed: In contrast, another set of teams (AT, CLC, and NA) provide guidelines and resources to schools for a process of change by which the schools specify and develop their own designs in keeping with general guidelines. The schools specify what they will become and develop their own curriculum, choose what kind of student groupings are appropriate, etc.

Design Team Specified and Locally Developed: A final group of teams (CON, EL, LALC, MRSH) take major responsibility in specifying the design, but will rely on the sites to further develop the models, curriculum, assessments, assignments, etc.

We expect that the team specified and developed designs will show more rapid progress during the design and demonstration phase, while the two approaches that depend on the capabilities of the schools to develop the elements of the design will show slow and non-uniform development due to variances in site level ambitions and capabilities.

Readiness Factors

Four factors affect design team readiness for entry into demonstration: whether the team was newly created, whether it needed to create a staff and structure to undertake the effort, whether the leadership of the team had to develop or be transferred, and the whether the team or team members as a group lacked experience in implementation of school level reform.

Putting these factors together, indicates that two teams, AC and RW, began with existing organizations with strong school reform experience. We would expect these teams to face relatively fewer challenges in building the capability needed to demonstrate their designs. Three other teams (CLC, CON and NA) had some prior experience or organizational base, but were handicapped in other ways. Four teams, AT, EL, LALC, MRSH, faced the demonstration phase with significant challenges regarding their readiness, when compared to the other teams, because they had to assemble new teams and organizations. One should expect that these teams might be slower to proceed than the others and will have more difficulties meeting the tight NASDC deadlines for demonstration.

Site Choices

For the most part, no pattern of site selection emerged across design teams. The selection process appeared chaotic, driven by NASDC deadlines. The teams did choose different numbers of sites and this might affect their ability to demonstrate their designs adequately. In this regard, CON, LALC, and NA appear most at risk for having selected too few or too many sites.

CONCLUSIONS

NASDC set out to develop the capability of a diverse set of teams and designs to affect school reform. Our descriptions in this document indicate that it has accomplished part of this goal. We draw two simple conclusions.

First, NASDC selected and promoted a diverse set of designs that include different approaches to reform as well as different strategies for how to demonstrate reforms.

Second, the diversity of the design teams and designs should lead to different expectations for outcomes in the two year demonstration phase.

Those teams with core focus designs, a team specification and development approach, strong indications of readiness and a modest

number of sites are more likely to do well and emerge with strong demonstration sites. Two teams fit this description: AC and RW.

Teams with three or more of the following will show slower progress and this progress will vary significantly from school to school: comprehensive or systemic designs, local specification and development, challenges in terms of readiness, and concentration in a few schools or in many schools. Progress in the elements of governance, social service integration and staff organization will be particularly slow. Three teams fit this description: AT, LALC, and NA.

A group of teams falls somewhere between these two extremes having some challenges (CON, EL, MRSH, CLC). All required significant local development approaches. Two, MRSH and CLC, include many elements in the design. Three, CON, EL, and MRSH, had challenges related to team readiness. Finally, CON is focusing all its efforts in one site.

FUTURE STEPS

Future reports will describe the issues that arose during the demonstration phase and how they were managed. Systemic barriers will be identified with possible solutions or policy implications.

ACKNOWLEDGMENTS

We would like to thank the New American School Development Corporation for its support for studying the implementation efforts of the nine design teams and of NASDC in general. This study would not have been possible without the aid and cooperation of the design teams, districts, and sites involved in the NASDC effort. People in each organization gave freely of their time to enable us to understand the issues involved in developing and demonstrating new designs for schools. We thank them for their efforts regarding this study, and also for their dedication to improving the educational prospects of all children.

LIST OF SYMBOLS

AC	Audrey Cohen College System of Education
AT	Authentic Teaching, Learning and Assessment
CLC	Community Learning Centers
CON	Co-NECT
EL	Expeditionary Learning
LALC	Los Angeles Learning Center
MRSH	Modern Red School House
NA	National Alliance
NASDC	New American Schools Development Corporation
RW	Roots and Wings

1. INTRODUCTION

In July, 1991, the New American School Development Corporation (NASDC) was established to develop designs and design teams capable of transforming current schools into high performing schools that prepare all students well. Funded largely by the private sector, it began a unique development program. It sought to engage the nation's best educators, business people, and researchers in the creation of teams that would develop and demonstrate whole school designs. The idea was to contribute to the national effort to reform schools by creating the capability in several teams to provide designs and school-level assistance that could more quickly and reliably aid whole school transformation.

A year later, following a major national competition, NASDC announced it was awarding contracts to 11 teams for a year-long design effort. In July 1993, nine teams were awarded two year contracts to demonstrate their designs in two or more schools in what NASDC termed its Phase 2 development effort. Currently, the nine design teams are developing and refining their concepts in approximately 140 schools in 18 states. If these demonstrations appear successful, the nine teams will become part of a national scale-up effort designed to foster the implementation of their designs in many schools across the country.

PURPOSE OF RAND ANALYSIS

RAND's Institute for Education and Training was selected to be NASDC's analytic arm. RAND helped manage the Request for Proposals (RFP) for the designs and helped formulate the process by which the winners were selected. RAND is now carrying out analyses of the development of the teams and their designs and of the barriers that might impede further development and demonstration of those designs in real schools.

NASDC gave RAND four analytical tasks:

- Analyze the experiences of the design teams as they develop and demonstrate their designs in real schools and distill lessons for both future implementors of these designs and future design teams.
- Monitor and ultimately synthesize the design teams efforts to provide evidence of the initial impact of each design.
- Assess the costs of implementing each design for potential adopters.
- Identify systemic barriers to the scale-up of NASDC supported designs.

Because it is simultaneously funding nine designs, the NASDC program provides a unique opportunity for identifying both common and distinctive features of designs and approaches to whole school reform. To the extent that NASDC school designs represent a reasonable vision of what schools should be in the future, this analysis suggests something of the state and district-level reforms that will be needed if designs such as these are to become widespread.

PURPOSE OF THIS REPORT

The principal purpose of this report is to develop a conceptual framework for comparing the NASDC designs. It provides, in a limited sense, the means for measuring the evolution of designs as it reports on the designs at an early stage in their development. This report answers four questions:

- What are the principal elements of the designs and how do the designs compare and contrast on these elements?
- What approaches are being used to develop the designs?
- What factors might affect the teams ability to demonstrate their designs?
- What are the implications of these differences in design and design teams for the results of Phase 2?

The observations in this report are based upon field work and document reviews from spring 1993 to spring 1994. Future reports will

provide more information on demonstration experiences and changes to designs in light of systemic barriers.

ORGANIZATION OF THE REPORT

The remainder of the report is organized as follows. Section two describes the purposes of NASDC and provides a brief history to date. Section three describes the approach that RAND has taken to tracking and analyzing the development of the designs. Section four provides general contrasts between the designs in terms of the breadth of the designs. Section five discusses development strategies of the teams. Section six discusses the readiness of the teams for the tasks they are undertaking. Section seven describes local site issues and how they might affect the teams. The final section provides some initial observations about the development of high performance schools based on the experience of the design year and a few months of implementation.

Appendix A provides a synopsis of each of the designs, following the element list used in the body of this report. Appendix B provides a description of the sites that are implementing the designs during the 1993 to 1995 school years.

2. NASDC PURPOSE AND HISTORY

We begin with a short review of the NASDC mission and key events that have shaped its program. This will provide the context for understanding the purpose of NASDC and the challenges faced by the teams.

FORMATION OF THE CORPORATION

NASDC was a prominent part of President George Bush's America 2000 educational initiative announced by Education Secretary Lamar Alexander in April 1991. The proposal followed the agreement on a set of National Goals for education between the President and the nation's governors, a forum presided over by then Governor Bill Clinton. Among other things, America 2000 proposed the development of voluntary national standards in major subject areas, called for the creation of America 2000 communities which would marshal resources to support the development of high performance schools, and proposed funding 535 New American Schools. NASDC, with private sector funding, was to promote teams to create designs and implementation supports that might be used by the New American Schools, but would be made widely available to all.

David Kearns, the Deputy Secretary of Education, played the most important role in creating NASDC itself. He recruited a prestigious board made up largely of CEOs of major American corporations. Some forty million dollars was immediately pledged to support NASDC, which is a non-profit corporation. The informal working group that helped to organize the Corporation set a larger goal of $150 to $200 million over a projected five year lifetime. The initial literature suggested that five to seven teams made up of businesses, think tanks, universities, and educators would be supported to develop designs which were to set aside the existing conventions and rules governing the design of schools.

The formation of the Corporation was announced in a Rose Garden ceremony at the White House in July 1991. The first president of NASDC was Frank Blount, an executive c[illegible]oan from AT&T.

PURPOSES OF NASDC AND KEY CONCEPTS

NASDC is unique in education reform efforts because of the purposefulness in which it has undertaken the development of the capability to transform schools.

Goals

Over the past decade a school reform intervention has been slowly emerging that involves the creation of design and assistance organizations peopled by experts with a common vision and goal that offer assistance to individual schools interested in transforming themselves. Examples of such organizations include the Coalition for Essential Schools, the Accelerated Schools, Paidaeia, Success For All, the School Development Program of Yale's Child Study Center, etc. Individually they have different emphases and different intervention strategies. In common they exhibit the same approach--a team of experts helping individual schools and each has had some compelling successes. Each also grew slowly because of lack of sustained purpose and resources for development. They often grew by fits and starts in a serendipitous fashion out of small research efforts. As Robert Slavin, head of Success For All, said, "we always have had money for research and evaluation of school programs, but never for development of successful intervention programs."[1]

NASDC is an extensive and formalized effort to provide resources for the systematic development of teams, their designs including implementation supports, and to support these teams' efforts as they aid real schools in their transformation. Its purpose as originally conceived is to, in a five year period:

- Develop a diverse group of design teams capable of leading schools through the transformation process,
- Sustain the teams in the development of diverse, but clear and stable designs that can be used by others,
- Provide observable demonstration and testing of the designs.

---

[1]Interview by RAND staff with Robert Slavin, October 14, 1993, Johns Hopkins Univeristy.

Phases

From the beginning, those who supported the NASDC effort have been dedicated to observable results within a five year time frame. The five years were divided into four phases as shown in Figure 2.1.

Pre-Phase 1: The first few months would be dedicated to a competitive RFP process for the selection of teams to be funded based on abstracts of potential designs, not fully articulated or existing ones.

Phase 1: The teams would then be given one year to further specify the designs and develop more detailed concepts as well as the capability to demonstrate the designs in real sites.

Phase 2: The teams would then have two years to develop demonstration sites, while further developing the designs and implementation strategies based on feedback from real schools.

Phase 3: Also lasting two years, the design teams would help many communities to adapt and use their designs.

Phase 3 is a key part of the NASDC mission. Its founders were anxious not to simply create a few high quality model schools. The RFP stated,

> *"This is not a request to establish "model" schools.* NASDC does not seek to develop "cookie cutter" designs. The designs must be adaptable so that they can be used by many communities to create their own new schools. A design team must have an effective plan to generate the energy required for local communities to create their own high-performance, break-the-mold schools. The important thing is that long after NASDC has disappeared from the scene, its legacy of new designs will remain."[2]

PRE-PHASE 1. RFP PROCESS AND SELECTION OF TEAMS

The request for proposals called for proposals for a five year program in which bidders were invited to imagine a new kind of American school--public or private--in which:

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[2]New American Schools Development Corporation, *Designs for a New Generation of American Schools: A Request for Proposals*, Arlington, Virginia, October 1991., p. 21, italics in original.

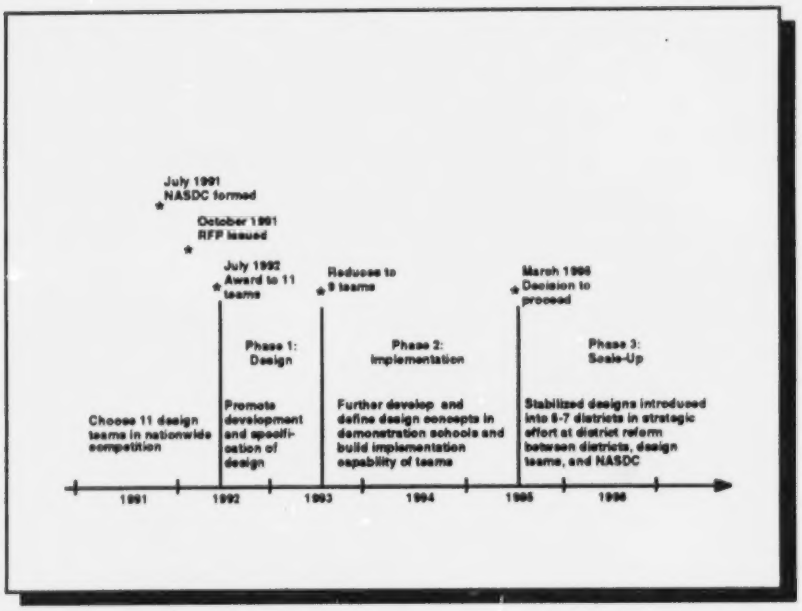

Figure 2.1—Time Line for NASDC Reform Agenda

- Assumptions about how students learn and what students should know and be able to do are completely reexamined;
- Visions of the nature and locations of schools are reconsidered; and
- The manner in which communities create, govern, and hold their schools accountable is redesigned.[3]

One of the criteria by which proposals were judged was their "potential for widespread application and the quality of plans for fostering such application."[4] The program possesses a strong business-oriented perspective; develop and test a new product and then go sell it.

The time schedule is short. It is common wisdom that school restructuring efforts takes five years or longer. At a workshop held in July 1991 to help design the RFP, representatives of then existing design teams seemed to generally agree that it takes longer than five

[3]ibid, p. 9.
[4]ibid., p. 35.

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years. However, the NASDC board was unwilling to accept this answer. It believed that ambitious deadlines were required to deal with what they perceived as a critical national problem. While the design teams could not create and fully prove designs in three years, sufficient progress and evidence would exist to permit other schools and school systems to decide whether the design held sufficient promise to merit adoption.

The RFP had several other important emphases as well.

- The designs were to integrate all elements of a school's life; they were to be for whole schools, not just a single grade or program within a school.
- They were to be "benchmarked" against demanding goals and achievement standards.
- The designs were to be for all students, not merely for those students most likely to succeed.[5]

Thus, NASDC decided that a school or a group of schools was the appropriate target of reform. It was created by people who believed that there should be high standards coupled with appropriate means of assessing performance against those standards.

Finally, and perhaps most importantly for the designs themselves, the schools had to be able to help virtually all students to reach these standards. This would force the designers to choose curricular and instructional strategies that could accommodate the varied learning styles of the nation's youth.

Up to $20 million dollars was to be potentially available to each team, allowing the development money that had not been provided to most reformers in the past.

Blount announced that he wanted a draft request for proposals (RFP) ready for public review by the end of August 1991. Design conferences were held to explain the RFP in August and September and a

[5]ibid., pp. 20 and 21.

final RFP was issued in mid-October 1991. Fifty page proposals were due on February 14, 1992.

The response was overwhelming. As one of the ultimate winners put it, NASDC was the "only game in town." Nearly 700 proposals were received. To review the proposals, NASDC held three four-day selection sessions involving more than 500 people from education, business, universities, and professional organizations. Following their review and that of NASDC's staff, NASDC announced it would make awards to 11 teams for the initial design effort.

PHASE 1 AND FUNDING ISSUES

While the solicitation and selection process moved along roughly on schedule, NASDC's fund raising efforts stalled. Over the first twelve months, almost no additional funding was obtained and the continuation of the program became increasingly precarious. The initial pledges provided sufficient funds to support the first year design effort, but plans for the second year were dependent on raising additional money. Plans for conferences and institutes intended to launch the designs had to be scaled back because of lack of funds and, in the spring of 1993, there were doubts whether funding would be available for the implementation of the designs.

A number of factors contributed to the fund-raising problems. Blount left for a new job in the telecommunications industry. His successor, former Secretary of Labor, Ann McLaughlin resigned after about 8 months because she felt she was unable to devote sufficient time to the job. Moreover through most of its lifetime, the United States economy was in recession and many firms in the private sector were cutting back on their contributions.

In the spring of 1993, David Kearns became President and CEO and initiated new efforts to seek funding.

PHASE 2 AND THE TEAMS

In May, 1993 President Clinton and Secretary of Education Riley strongly endorsed NASDC as an activity that complemented the Goals 2000 program that they had submitted to the Congress. With that endorsement,

Kearns and members of the board succeeded in raising sufficient funding to initiate the implementation of the designs in July 1993. In the fall, Ambassador Walter Annenberg announced that he was donating an additional $50 million to NASDC (he had already contributed $10 million) which would allow it to complete the initial two years of implementation.

At the end of the first year, nine of those teams were awarded grants to implement their designs in two or more schools. Two were judged to have failed to meet the objectives that were agreed upon and to lack promise for wide scale implementation. Currently, these nine teams are in the midst of Phase 2, further developing their designs and demonstrating them in two or more schools.

The Design Teams

Brief descriptions of the designs that did move forward follow. We note that the following statements encapsulate the visions of the designs, not the realities of their demonstration which remain to be seen.

Audrey Cohen College System of Education (EC). A holistic and purpose-driven curriculum is the centerpiece of the design. This interdisciplinary, applied learning curriculum focuses on the purposes of learning and leads students through a series of constructive social actions. All associated activities in the school change to support the learning purposes. For grades K-12.

Authentic Teaching, Learning, and Assessment of All Students (ATLAS). The design requires a participatory governance structure focused on a K-12 feeder pattern (pathway). While it has strong principles of interdisciplinary curriculum and instruction, the unique focus is on the consensus building governance needed to lead away from fragmented, bureaucratic learning environments to unified support for a community of learners. For grades K-12.

Community Learning Centers (CLC). The design requires that schools have an "institutional bypass" from the current system of regulations that bind school level improvement. The core of the school is individualized instruction with continuous assessment of student and

school progress. The school becomes the community center for education, social, and health services. For grades K-12.

Co-NECT (CON). School-based design teams tailor a generic design to meet local needs. With district and community support, the local design is implemented, and continuously refined, by teams of empowered, accountable teachers. Modern technology, featuring desktop Internet participation, supports a project-based curriculum and continuous assessment of school and student progress. For grades K-12.

Expeditionary Learning (EL). Dedicated to complete development of students and teachers by extending the values of Outward Bound into schools, the curriculum and instruction move toward expeditions of learning intended to develop intellectual, physical, and civic sides of students. Teachers become guides and are provided continuous, innovative professional development. For grades K-12.

Los Angeles Learning Center (LALC). A unique partnership of the district, teachers' union, universities, businesses, and community groups to overcome urban distress and jointly build a school of the future dedicated to individual support. Emphasis is placed on strong social support for students from school and community members. For grades K-12.

Modern Red School House (MRSH). The design blends elements of traditional education with new instructional methods to provide all students with a strong foundation in American culture as well as skills needed for future employment. For grades K-12.

National Alliance for the Restructuring of Education (NA). An alliance of states, districts, schools, and expert organizations created to effect system change at all levels by promoting ambitious standards and accountability mechanisms. The design focuses on outcomes-based governance with decentralized decisionmaking and the provision of strong professional support to teachers and schools. For grades K-12.

Roots and Wings (RW). A relentless and organized approach to ensuring all children will leave elementary schools with skills required for success. The design reallocates existing federal, state, and local resources into a system of curriculum, instruction, and family support

designed to eliminate special education and low achievement. For grades K-6.

The capsule comments above do not do justice to the diversity and vision of the designs, but are intended to provide more than the title alone would. Appendix A of this report contains a somewhat more detailed description of key elements of each design.

3. RAND'S PURPOSE AND APPROACH

This section describes the purpose of RAND in the NASDC effort, and more specifically addresses the methodology used for what has become known as the demonstration/implementation analysis which this document sets up.

RAND PURPOSE

There are two goals for RAND's program of analyses for NASDC.

(1) The first is to help NASDC and its design teams successfully accomplish their goal of developing, demonstrating, and scaling up their designs. This requires immediate and private feedback to this group that will not be found in this report or others.

(2) The second is to analyze and synthesize the experiences of the design teams and their demonstration sites in order to provide information to potential users of the designs and to policy makers who are shaping the education system within which the designs will be implemented. The audience for this information is public and includes school, district, and state administrators, education reformers, journalists, and fledgling design teams not under NASDC's umbrella.

These goals will be supported by four tasks undertaken over the next two years.

- Analyze the experiences of the design teams as they develop and demonstrate their designs in real schools and distill lessons for both future adopters of these designs and future designers of new designs.
- Monitor and ultimately synthesize the design teams efforts to provide evidence of the initial impact of each design.
- Assess the costs of implementing each design for potential adopters.
- Identify systemic barriers to the scale-up of NASDC supported designs.

This report deals primarily with the first and last tasks. We state unequivocally that the tasks are not evaluations. RAND is not now evaluating the outcomes of the designs in schools such as changed student performances or changed school performances. The designs and teams at this point are unstable and the purpose of Phase 2 is to develop designs and demonstration sites to the point when more formal evaluations would be appropriate. A controlled experimental design for evaluation of different reforms is not appropriate. The entrepreneurial spirit under which NASDC operates calls for each design team to develop its own unique vision, unconstrained by a researcher's desire to carefully manipulate one or two elements of design to understand their particular effects. Designs are to be made of whole cloth with the full commitment of the team and sites.

Design teams are responsible for their own evaluations of Phase 2. Given the short period of time, two years in which to make an measurable impact in a school, and the developmental changes expected in the designs, we imagine that these evaluations will not be compelling. On the other hand, evaluations of the Phase 3 efforts, when designs are stable and teams capable, would make more sense and be expected to show more compelling evidence for support or non-support of future design team efforts.

CASE STUDY APPROACH

The phenomena to be studied is the model of change adopted by NASDC, the creation and intervention of an entity called a design team to promote school reform. The phenomena includes the development of the teams as well as their experiences in demonstrating their designs. This highly complex process lends itself to case study analysis. The evidence sought is qualitative--actor's descriptions and assessments of their experiences and barriers to their desired actions. We rely entirely on the choices of the teams' and their sites to provide contrast of interest between designs.

UNIT OF ANALYSIS AND CHOICE OF CASES

The design team and its design is considered as the unit of analysis; resulting in nine cases. However, we expect the relationships of each design to its demonstration sites to be unique and to offer interesting insights. Therefore, the sub-unit of analysis will be the school or district (when appropriate as the design team's intervention point).

For each team we have chosen two schools or districts to study with agreement by the team and NASDC. For example, the CON design has chosen to work in two schools in two different districts. We agree that these two schools form the basis for observations about the ability of the team to demonstrate its design in real schools. However, the AT design's construct is a pathway, a set of schools that feed students into each other. The unit of analysis for this team is the pathway which consists of several schools. Thus, for AT we chose two pathways to study, each pathway includes several schools.

We have tried to create as diverse a sample as possible, including stressed and unstressed districts, elementary schools, middle schools, and high schools, poor schools and not-so poor schools, urban and rural. Table 3.1 shows some of the key features of our sample.

DATA SOURCES AND TIMING

Because the designs intend to influence people at many levels, as will be shown in the following sections, an embedded case study is appropriate. We use several sources for information and several types of information:

- Documents produced by NASDC, the teams, and schools describing their efforts.
- Elite interviews with important actors including design team members, parents in governing committee, lead or master teachers, school administrators, district administrators, and state administrators.
- Focus groups of students, teachers, parents.

Table 3.1

CHARACTERISTICS OF THE RAND SAMPLE

Design Teams	School	Grade Span	Enrollment	Free & Reduced Lunch	Setting
AC					
Phoenix, AZ[1]	Loma Linda	K-8	1200	90	urban
San Diego, CA[2]	Alcott	K-5	395	n/a	urban
	Franklin	K-5	540	72	urban
AT					
Gorham, ME[3,4]	Gorham High School	9-12	500	16[7]	small city/rural
	Little Falls	K	200	16[7]	small city/rural
	Narragansett	1-3	n/a	16[7]	small city/rural
	Shaw	7-8	340	16[7]	small city/rural
	Village	4-6	600	16[7]	small city/rural
	White Rock	1-3	150 est.	16[7]	small city/rural
Prince Georges Co., MD[5]	Adelphi	PK-5	655	64	urban
	Buck Lodge	6-8	675	78	urban
	High Point	9-12	2117	40	urban
	Langley Park	PK-5	803	84	urban
CLC					
Cloquet, MN[6]	Fond du Lac	PK-12	231	n/a	reservation
Duluth, MN[4]	Spotted Eagle	K-6	106	n/a	small city
Minneapolis, MN[6]	Cedar-Riverside	K-8	82	90	urban

Table 3.1 (cont.)

CHARACTERISTICS OF THE RAND SAMPLE

Design Teams	School	Grade Span	Enrollment	Free & Reduced Lunch	Setting
CON					
Worcester, MA[6]	ALL School	K-8	466	80	urban
EL					
Dubuque, IA	Bryant[6]	K-5	349	267	small city
	Lincoln[6]	K-5	419	267	small city
	Central[5]	9-12	162	267	small city
New York, NY	School for the Physical City[4]	6,7,9	125		urban
LALC					
Cudahy, CA	Elizabeth Street[4]	K-8 est.	2000	n/a	urban
Los Angeles, CA	Foshay[4]	6-8 est.	2000	n/a	urban
MRSH					
Bartholomew, IN	Columbus East	9-12	n/a	n/a	small city/rural
	Northside	6-8	n/a	n/a	small city/rural
	Taylorsville[5]	K-6	504	23	small city/rural
Indianapolis, IN[5]	Frost	K-5	293	60	urban
NA					
Louisville, KY[6]	Kennedy	K-5	411	n/a	urban
Calloway County, KY[6]	Calloway Middle	6-8	727	38[8]	rural
	Southwest Calloway	K-5	482	37[8]	rural
San Diego, CA	Darnall[5]	K-5	407	90	urban
	Marshall[6]	K-5	903	93	urban

Table 3.1 (cont.)

CHARACTERISTICS OF THE RAND SAMPLE

Design Teams	School	Grade Span	Enrollment	Free & Reduced Lunch	Setting
RW					
St.Mary's County, MD[3]	Ridge	PK-5	276	29	rural
	Lexington Park	PK-5	474	42	small city

NOTES: n/a - Data not provided.

[1]Data approximate, as of visit 2/95.

[2]Data reported 1994.

[3]Date reported 1991.

[4]Grade spans and enrollment as of 1993-94 site visit.

[5]Data reported 1992.

[6]Data reported 1993.

[7]District level data, not reported for individual schools.

[8]Percented reported as "low income."

- Casual observation of school activities and a limited number of classes.

This information is being gathered in three waves: fall 1993 site visits, spring 1994 site visits, and spring 1995 site visits. Each site and team will be visited three times during Phase 2. The last visit corresponds to the end of Phase 2. In addition, RAND staff has attended summer workshops held by teams, conferences, etc., when appropriate.

DATA BASE FOR THIS REPORT

The description of designs and development plans reported in this document represent a baseline upon which to track the evolution of the designs during Phase 2. RAND staff has read and analyzed the proposals, design documents produced at the end of Phase 1, and many of the interim reports that have been provided to NASDC by the teams. We made at least one visit to each of the teams during Phase 1. In summer 1993 we attended parts of the summer institutes or staff development meetings that were held by all the teams but one. These visits allowed us to become familiar with the manner in which the design teams described their designs to their demonstration sites and the broad strategies they planned to use to develop their designs beginning in the fall of 1993.

In October, November, and December 1993 (year 1, Phase 2) and again in March, April, and May of 1994, teams of two RAND staff visited each design team and at least two sites at which the design was being implemented for each team. In addition to the design team staffs, interviews were normally conducted with the s[illegible]ls' principals, key design-related site personnel such as facilitators and coordinators, and with a number of teachers. We also interviewed central office personnel and, in some instances, the superintendent. In some cases we talked with parents and volunteers. Each of these interviews was based on an interview protocol that was developed during the summer of 1993. Typically, we devoted about three person days to each site. We have visited a total of 35 schools. This report is based on these interviews and the document review.

FUTURE DATA COLLECTIONS AND REPORTS

To complete the analysis, RAND will visit the same schools in April and May of 1995, using a revised protocol. The goal will be to learn how the development and demonstration has evolved since spring 1994 when it was often in its early formative stages. We will also focus more explicitly on systemic barriers to the development and demonstration of the designs and on the real costs of implementing the designs. We will seek to spend more time with teachers, parents and governance teams. After a set of visits to Phase 2 in spring 1995, a final report will be disseminated.

TRACKING CHANGES OVER TIME AND ORGANIZING DATA

A key theme in RAND's analysis is an examination of the evolution of the designs through time and the reasons for changes to the designs or planned progress. The initial proposals constitute the starting point. The designs evolved through Phase I and will continue to evolve through Phase 2. We are interested in documenting the changes that have occurred and the reasons for them.

We intend to use elements of whole school designs as a means to contrast and compare designs and also as a means to follow changes in designs over time. These elements are related to John Goodlad's notion of school commonplaces or characteristics of schooling that are evident in all schools even though the specific dimensions of those commonplaces might vary among schools[6]. So, for example, all schools have a curriculum, a governance structure, and a way to determine how students are progressing, but the details of these elements vary among schools. Elements are basically ways to define the organization called school and the process called schooling.

We chose key elements to describe, compare and contrast the NASDC designs. While they are common simply because they exist in all schools, the relative emphasis on these elements is also a product of the RFP process and the research base that supports educational reform. The NASDC RFP asked that some elements be specifically addressed and

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[6]Goodlad, John, *A Place Called School*, New York, McGraw-Hill Book Company, 1984.

that designs reflect America 2000 goals. Thus, because of language in the RFP, all designs describe how they will deal with standards and assessments. Because "all students entering school ready to learn" is an America 2000 goal, all designs address the need for social services to support education in some fashion. Some elements are commonly addressed because a strong research base has led those interested in education to form similar hypotheses about how to improve performance. For example, while the importance of children coming to school ready to learn is one of the America 2000 goals, the need to provide social support for children and their families is strongly indicated by a growing literature that was cited by teams as influencing them in constructing their designs.

The elements used in this analysis follow in brief form; each will be further defined in subsequent paragraphs. We note the definitions used might appear somewhat vague. This is to allow for the great variance among designs in the details of the common features.

- **Curriculum and Instruction**--These two elements include what knowledge bases are learned and in what sequence, and the manner in which knowledge is transmitted to the student.
- **Standards**--Levels of attainment expected of students to progress through the system and levels of attainment necessary for schools to be judged effective.
- **Assessments**--The means for measuring progress towards standards, either by the schools or by students.
- **Student Grouping**--Means for assigning students to classes, groups, programs.
- **Community Involvement**--How parents, business and others participate in schools and vice versa.
- **Integration of Social Services** --How and when social services will be provided for students to be ready to learn.
- **Governance**--The distribution of authority and responsibility among education actors: states, districts, school members, and others. School level governance changes usually increase its participatory nature, district to school governance changes

usually require site based management, and state level changes often demand different legal responsibilities for schools and districts or different legal responsibilities among education and non-education partners.

- **Professional Development**--How the organization supports the staff in delivering the curriculum and instruction effectively.
- **Structure, Staffing and Allocation of Staff Time**--The roles and responsibilities of different staff.
- **Use of Technology**--How electronic information systems will be used in the school.

We now turn to the specifics of the designs to compare and contrast them further.

4. DESIGNS AND THEIR CHARACTERISTICS

This section examines the designs and their elements at the macro-level in order to make some rough comparisons as well as to set some expectations for Phase 2. Commonsense would argue that, if indeed NASDC supported a diversity of designs, one would have different expectations regarding them. This section should acquaint the reader with the common features and differences among the designs as well as explore the range of the NASDC undertaking. We contrast and compare the designs on the elements identified in the last section (with the exception of the use of technology) to illuminate apparent groupings of designs and draw some simple expectations about Phase 2, given the differences.

DESIGNS' APPROACH TO SCHOOL CHANGE

Two characteristics capture the essence of the many difference among designs: the number and type of elements included in the design and the number of collaborators that the design team must have to develop the design at a site, see Figure 4.1.

The core focus designs tend to place their greatest emphasis for change in a narrow set of elements: curriculum, instruction, standards, assessments, student groupings, community involvement and professional development. They emphasize school level partnerships as their main point of entry and continued interaction.

The comprehensive designs tend to emphasize more elements and include integrated social services, governance changes, and organization and staffing changes as important, even distinguishing elements, of the designs. These teams believe that they need to develop and maintain collaborative efforts with actors outside of schools to accomplish these goals. Nevertheless, they still focus on schools as the intervention point of their designs.

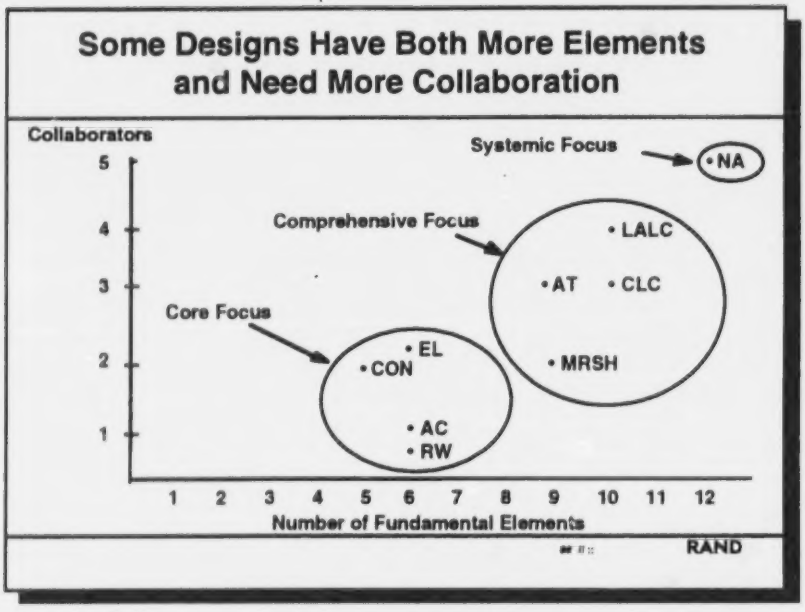

Figure 4.1—Some Designs Have Both More Elements and Need More Collaboration

Finally, one team is taking a more systemic approach. It covers all elements and intends to support collaborative arrangements with many actors in an effort to change the systems that support individual schools. It point of intervention is at the central office or district level and with other agencies that support schools.

COMPARATIVE BREADTH OF DESIGNS

The design teams contrasted rather sharply in terms of the elements included in their proposals at the end of Phase 1 that the team considered fundamental to the vision of the design.[7] Content analysis of the proposals, including updated design documents in 1994, as well as

[7]This section does not do justice to the uniqueness of the designs, their differences in detail, and their integrated completeness. It is quite impossible to describe parts of designs and do justice to the total vision of schooling unique to each one. Each of the nine designs stands as a whole piece--a description of a whole school or system of schools intended to promote higher and different student performance than in the past. To avoid a completely fragmented picture, Appendix A has a synopsis of each design and Appendix B describes each element and the contrasting positions taken.

interviews with the teams showed the teams differed in the inclusion or exclusion of desired changes reflected in the element list and the relative emphasis they put on those elements.

The following paragraphs contrast the designs by element. The results, which indicate elements included in the design, are shown in Figure 4.2. If a team emphatically included an element, we colored it black indicating that the team is challenged to produce something in this element category. If the team was weaker in its emphasis, or if we judge it to be a modest change compared to others, we colored it gray. If the design did not address that element the category is left blank.

Curriculum and Instruction: All design teams said they intended to make significant changes to the elements of curriculum and instruction. There is a general trend by all teams toward

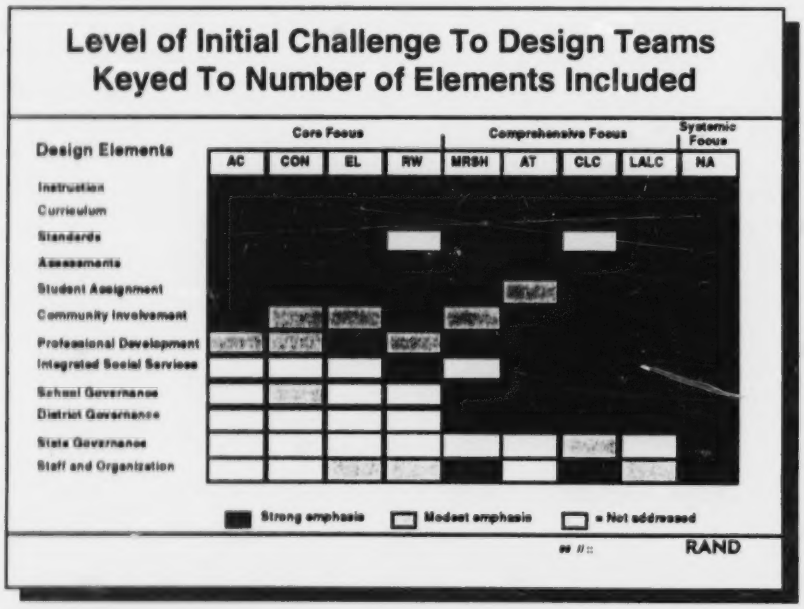

Figure 4.2–Level of Initial Challenge to Design Teams Keyed to Number of Elements Included

interdisciplinary, project based curriculum, in several cases tailored to individuals. Several include service to the community and internships as part of a required curriculum. However, the details of

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these changes indicate a great deal of variation among teams. Nevertheless, all teams felt changes in these two elements were fundamental.

Standards: All teams said they intended to create new standards, of one type or another, except for CLC and RW. These two designs will use existing state standards, but bring all students to those standards. Thus, they do not have a major challenge of creating new standards as other teams do. Two teams, AC and MRSH, are creating their own unique standards, while others are combining existing standards and particular skills together to emphasize the concerns of their team.

Assessments: All teams intend to develop at least performance based student level assessments keyed to their standards, curriculum, and instruction. Several talk about systems of assessments. At this time, however, the designs did not distinguish themselves further.

Student Assignment: Seven teams emphasized needed changes to the assignment of students within schools such as multi-age grouping, multi-year groupings, cooperative learning, project based-learning in groups, etc. The exceptions are AC and AT. However, while these two teams did not specify this, in some ways it could be considered implied by their curriculum and instructional methods.

Community Involvement: Six teams emphasized the need for "greater community involvement" in the school or greater school involvement in the community as a key thrust of the design. For the three others, CON, EL, MRSH, this was noted, but is not a major emphasis.

Professional Development: Six teams stated that they intended to make fundamental changes to the professional development process for teachers as part of their designs, oftentimes including changes to the role of teachers and to teacher education. Two other teams (AC, RW) did not indicate fundamental changes to the process, rather they indicated professional development would be changed to emphasize significant training in their particular methods.

Integrated Social Services: Five teams placed a good deal of emphasis on the provision of integrated social services in schools (AT, CLC, LALC, NA, RW). AT, CLC, LALC and NA emphasized the need to make the school the focus of provision, integrating education and social

services. RW has a family support coordinator at the school but does not require integrated social services at the school.

School-Level Governance. Five teams (AT, CLC, LALC, MRSH, NA) require formal changes to school level governance--usually the set-up of governance committees with participation of teachers and others. CON promotes the set up of two committees, but this was not key to the design. Others encourage these types of changes, while not emphatically requiring them..

District-School Governance. Five teams require formal and very significant changes to the relative functions of the schools and district (AT, CLC, LALC, MRSH, NA). Each of these requires significant school-level control over resources, budgeting, and staffing. The other teams promote and encourage this, but did not require it.

State Governance. One team, NA, seeks changes at the state level to promote reform including formal changes to the responsibilities of the education and social service agencies. CLC implies state level support for charter schools, but this is not a prerequisite for non-charter school districts in its sample.

Staff and Organization. Finally, three teams emphasized the need for significant, permanent changes to the staff structure, and in fact based their designs on these changes (CLC, MRSH, NA). Three others were not so emphatic (EL, LALC, RW).

An interesting pattern emerged from a simple analysis of these relative emphases. Four designs (AC, CON, EL, RW) place emphasis on and confined themselves primarily to changes in: curriculum, instruction, standards, assessments, student assignments, professional development, and community involvement. Five designs (MRSH, AT, CLC, LALC, NA) covered these elements, but were emphatic about changes to governance, social services, and school organization.

This simple distinction between designs, the breadth of elements covered, indicates that some designs have more to do to demonstrate their designs in Phase 2 than others. Five (MRSH, AT, CLC, LALC, NA) have more areas to cover and in which to demonstrate changes than the other four designs.

DEMONSTRATION CHALLENGES ASSOCIATED WITH ELEMENTS

In attempting to identify challenges inherent in the designs, one must ask, "are any of the elements more difficult to change within the NASDC construct for demonstration within Phase 2?" We believe the answer is yes.

Elements of curriculum, instruction, standards, assessments, and student assignments are fairly well understood by and familiar to education reformers. Note this statement does not indicate that reformers agree on specific interventions or that they have successfully and permanently implemented them, merely that reformers have developed useful models and interventions for these elements in the past and can be expected to do so in the future. To develop and demonstrate new approaches for these elements would be a challenge, but not an overwhelming one, at least not on the face of it.

The elements of governance, integrated social services, and organization or structure provide a contrast. These elements are clearly identified with "restructuring" reforms. As more schools and districts attempt "restructuring", evidence is compiling that restructuring is difficult to accomplish and slow to materialize. Research is beginning to show, that slow, non-uniform progress toward changes in these elements can be expected for the following reasons[8].

- Local context has an overwhelming impact on the ability to demonstrate these reforms.
- These elements are controlled by organizations outside the normal influence of small groups of reformers or of schools.
- The processes to change these elements require complex negotiations by many actors, which are slow and time consuming.

This would lead us to expect that designs with these elements might have difficulty meeting the NASDC timeframe for demonstration

[8]Policy Studies Associates, Inc., *School Reform for Youth At Risk: An Analysis of Six Change Models, Vol. I: Summary Analysis*, U.S. Department of Education, 1994. Liberman, Ann, et. al., *Early Lessons in Restructuring Schools*, NCREST, August 1991. Bimber, Bruce, *The Decentralization Mirage, Comapring Decisionmaking Arrangements in Four High Schools*, RAND, Santa Monica, 1994, MR-459-GGF/LE.

within sites. From the above, one might expect that several designs (AT, CLC, LALC, MRSH, NA,) would face significant challenges in this regard.

NEED FOR COLLABORATION AND PARTNERS

The designs also offered significant contrasts in the emphasis they placed on collaborative efforts with groups outside the design team to demonstrate their designs in schools. Figure 4.3 shows the different types of collaborations (outside the team) that the design teams talk about or require for the further specification and demonstration of their designs.

Five teams focus almost exclusively on schools and their associated districts as the main focus of collaboration in their demonstration efforts (AC, CON, EL, MRSH, RW). Conversations with team members indicate that they place primary emphasis on schools as their partners and think about their contribution to reform as a school by school effort.

In contrast, four teams (AT, CLC, LALC, NA) require cooperation or collaboration with actors other than districts--most notably states, teachers' colleges, and social service providers. Conversations with these teams confirm that they place significant emphasis on collaboration with actors external to the school. For NA, these interactions are as important, if not more so, than those with individual schools.

We draw a simple inference from this. Those teams with more need for collaboration face a greater challenge in completing the design within the NASDC time frame. They must develop and specify their design, as well as, build and maintain partnerships and influence with more actors in order to demonstrate their design at sites--a challenge to resources and capabilities.

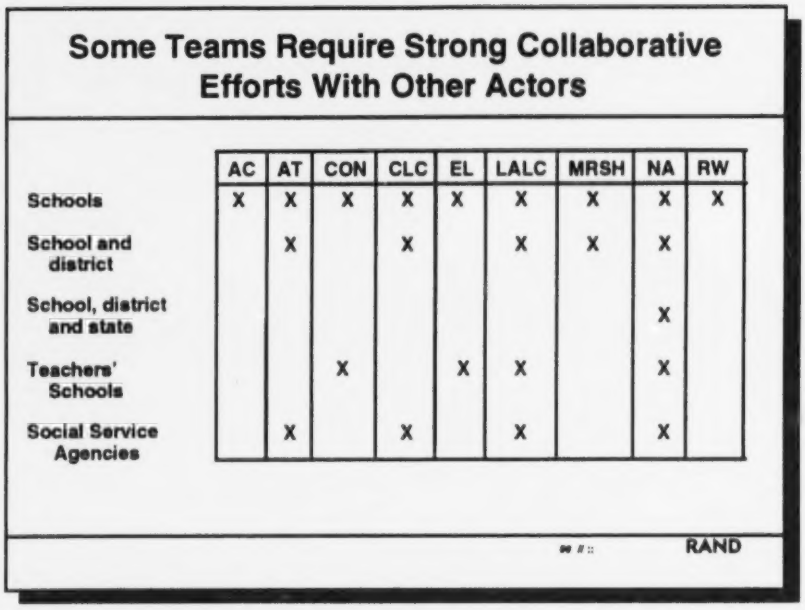
Some Teams Require Strong Collaborative Efforts With Other Actors
AC AT CON CLC EL LALC MRSH NA RW
Schools X X X X X X X X X
School and district X X X X X
School, district and state X
Teachers' Schools X X X X
Social Service Agencies X X X X
RAND

Figure 4.3—Some Teams Require Strong Collaborative Efforts with Other Actors

IMPLICATION OF DESIGN APPROACHES FOR PHASE 2

These themes--broadness of element coverage, difficulty of changes to elements covered, and needed collaboration--merge into three approaches for reform that distinguish the teams as well as form expectations about their ability to meet NASDC goals.

The core focus designs tend to place their greatest emphasis for change in seven elements: curriculum, instruction, standards, assessments, student groupings, community involvement, and professional development. They emphasize school level partnerships--it is their main point of entry and continued interaction. As such the approach is intended to develop a design and team that can help schools make major and direct changes in the core of schooling--what goes on in the classroom.

The comprehensive designs (AT, CLC, LALC, MRSH) tend to emphasize more elements and include integrated social services, governance changes, and organization and staffing changes as fundamental to the design. These changes are intended to indirectly affect the schools over time. These teams believe that they need to construct partnerships

or collaborative efforts to support the schools. While a good deal of their efforts will likely go to the development and maintenance of collaborative efforts at reforms, their primary focus is still on individual schools or small clusters of schools.

Finally, one team (NA) has taken a systemic approach, encompassing all elements, and working primarily outside of schools to make these changes.

We would expect that comprehensive and systemic designs would face greater challenges than the core focus designs in terms of meeting the Phase 2 goals of NASDC. A combination of focusing on more elements, focusing on elements with greater difficulties for short-term change, and needing to manage a greater number of external collaborations or partnerships, presents obvious challenges to these teams when presented with the strict NASDC demonstration deadlines. However, over the long term, these designs might promote fundamental changes needed in school support systems that are the key to reform permanence.

5. DEVELOPMENT STRATEGIES AND PROCESSES

Those who would reform the educational system are well aware of the difficulties involved in the process of change. Wonderful, but abstract, concepts for schooling have failed to be demonstrated in actual schools as the schools changed the concepts to fit their own circumstances. Past studies of reform efforts have shown that the design as demonstrated was often not the design envisioned.[9]

This section explores the strategies chosen by the design teams to transform their abstract concepts into well-specified and developed designs in the Phase 2 period. This section describes the development philosophies of the teams. These are combined to indicate three different approaches to the Phase 2 development evident in the teams activities.

RESPONSIBILITY FOR FURTHER DEVELOPMENT

Each team had to determine how to go about the further specification and development of the designs concepts as well as the ultimate implementation in Phase 3 sites. Who would do this work of specifying and developing the designs was an obvious issue facing the teams.

By responsibility for design specification we mean that someone had to make decisions about what would or would not be included in the design, element by element and within element. For example, in specifying the design element of new student grouping, someone must decide if the design includes multi-year or multi-age grouping as an essential component of that element. In specifying instructional strategies, someone must determine whether the design demands project-based learning or not. If it does, then someone must also decide the relative balance between this type of curriculum and instruction and other types such as didactic pedagogy.

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[9]Milbrey McLoughlin states this as "Implementation dominates outcome", "The RAND Change Agent Study Revisited: Macro Perspectives and Micro Realities", *Education Researcher*, December 1990, p. 12.

Responsibility for development can be separated from responsibility for specification. After a decision that something belongs in the design, then someone must develop the models, plans, and materials that further develop the element and guide actors in the demonstration. In the case of project-based learning, someone would be responsible for developing projects for teachers to use that met the standards of the design. Someone would also have to develop the models of multi-age grouping that would be most appropriate to the design. Do fifth and sixth graders get grouped together or sixth and seventh? Or is the choice made by individual assessment, not age?

In general, the choice of who would be responsible was a choice between the design team or the personnel at the site, usually teachers. In making that choice design teams, as indicated in proposals and interviews, referred to the "school implementation" literature to guide their efforts.

THEMES FROM SCHOOL IMPLEMENTATION LITERATURE

The following are some of the themes teams drew from the literature.

Reform Specification and Local Adaptation

Specification of the reform agenda, policies, and practices is crucial to reform. First, full specification is said to be important for successful demonstration or implementation.[10] Poorly specified or under specified reforms do not provide the lowest level of the organization (meaning teachers and schools administrators) with clear direction toward change. Vague mandates for change do not provide personnel with well defined reform tasks. Operators do not know what they are supposed to do to support the reform and soon fall into old habits.

However, for operating levels that have significant existing autonomy such as classroom teachers, an overly specified design can challenge that autonomy and provoke non-compliance with the intent of the reform. In general, and perhaps specifically with groups with great

[10]This argument is most firmly stated in Mazmanian and Sabatier (1981).

autonomy, mutual development of the specifics of the reform is thought to lead to more "buy-in" and reduced implementation problems related to operator understanding.[11]

Site Level Adaptation

Most research talks about demonstration or implementation being site-specific.[12] Local level factors are bound to affect implementation of any general reform idea. Thus, researchers often talk of a need for local actors to change the design to meet local needs. Note this is different than the need for buy-in, which calls for adaptation between school level operators and external mandators of change. Local actors often adapt generalized concepts to fit with local realities. However, if local adaptation runs rampant, as might be the case for a locally specified and developed design, then little change might be forthcoming as the design is held hostage to local politics, local personalities, and local capacity shortfalls.

School Level Assistance

A large part of the implementation literature is also concerned with what types of assistance are needed to get people to change their behaviors, including specific models, training, face to face coaching, secondary materials, networks, funding, time to develop mutually acceptable reform tasks, etc. The original work of Gross, Guiaquinta and Bernstein (1971) indicated that even though administrators and teachers might be initially highly supportive of reform concept, this does not directly translate into change[13]. If assistance is not provided, then the reform does not take place. Training and resources are often included in plans for implementation. However, when budgets become tight, training and other resources for change are the first to

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[11]This argument is elaborated in Berman and McLaughlin (1975).

[12]Again summarized by Mazmanian and Sabatier (1981), but demonstrated in Berman and McLaughlin (1975) for education reform and more recently by Bodilly, Ramsey, Stasz, and Eden (1993) and Bodilly, Purnell and Hill (1994). Mirel (1994) provides an insightful case study of the affects of local politics on a reform effort in Bensenville IL, one of the two teams dropped by NASDC after the design year.

[13]Gross, Neal, Joseph Giaquinta, and Marilyn Bernstein, *Implementing Organizational Innovations*, Basic Books, New York, 1971.

be cut in order to preserve current operations. This results in implementation failure.

For complex tasks, simple training routines will not be enough to change behaviors. Instead, strong face to face support over time and opportunities for practice in real life situations is needed to get permanent change in behaviors. Altogether, this adds up to the need for dedicated resources by the design teams and districts to schools for reform to enable the demonstration of the design.

Implications

This points to the need for design teams to carefully balance the roles of the relative players in further specification and development, if they wanted to be able to demonstrate the designs by the end of Phase 2. On the one hand, a strong team role in both specification and development of the design with strong school level assistance would be likely to ensure the design is demonstrated as originally envisioned. This approach, however, runs the risk of a backlash from teachers and problems arising because the design is not appropriate to site-level conditions. On the other hand, greater local input in specification and development will ensure sites buy-in. They would in fact mold team guidelines to fit their circumstances. This approach might result in non-uniformity across sites in the short run and slow movement toward demonstration as sites differ in their capacity for change and as the design itself is molded to meet the pace of change suitable to the locality.

DEMONSTRATION APPROACHES

Interviews with the design teams and a review of the proposals indicated that all had given deliberate thought to the relative responsibility of the team and the sites in further specification and development. All teams talked in terms of organizational change being more likely if a flexible, mutual adjustment process was used. They avoided highly prescribed designs or mandatory styles of implementation. All teams used at least some aspects of a prototype development where the design is expected to evolve as the schools and design teams respond

to each other and move together toward improved levels of performance. Each team talked of its design unfolding or evolving with practical experiences. While a common approach is apparent, at least when compared to some past top-down reform efforts, the teams have different development strategies that will likely affect the demonstration experience as shown in Figure 5.1.

Team Specified and Developed

One group of teams, including AC and RW, is more reliant on the capabilities of the design teams to further specify and develop the design. These two teams, in contrast with others, had existing models and had demonstrated parts of these models prior to the effort. Their proposals to NASDC are comparatively specific about what is included and not included. Their intention is to work with the schools to further develop the designs, but the teams themselves carry the burden of responsibility. The teams will provide the curriculum frameworks, models of lessons plans, list of resources, models for student assignment and assessment in keeping with the specific elements of the design. Teachers will experiment and use these models and provide feedback during the Phase 2 period, oftentimes developing pieces of the specific curriculum. The design team will then adapt the design and supporting materials to be more user friendly.

Expectations for this group should be that, assuming the team has the capabilities needed, the further development and demonstration of the design should go smoothly as long as the design teams and schools understand the nature of the design and agree with it.

In the future (Phase 3) the intentions of these teams is to offer strong and firm designs to schools, with expert assistance in the implementation of the designs.

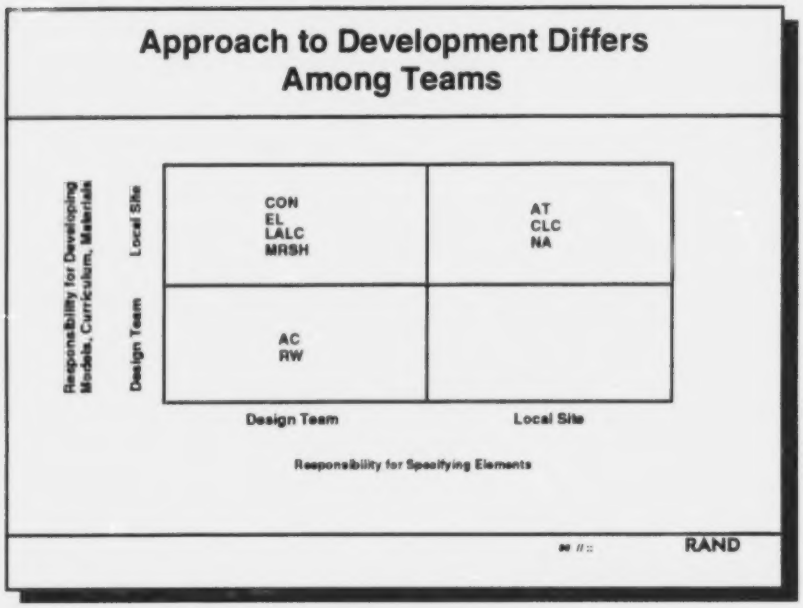

Figure 5.1—Approach to Development Differs Among Teams

Locally Specified and Developed

In contrast, another set of teams, including AT, CLC, and NA, will provide guidelines and resources to schools and guide the schools through a process of change where the schools specify and develop their own designs in keeping with general guidelines. For example, NA will provide a set of standards for the schools to work with, a set of tasks to undertake such as the development of a school improvement plan and working with local social service providers, and some resource for undertaking these tasks. The resources tend to be access to experts, conferences, and written materials that will broaden the scope of the school and expose its staff to new ideas.

AT has a sequential process that schools must go through to transform. For example, the district must set-up a pathway and the pathway must set up new governing committees. These committees will then begin to transform the school with the aid of the design team. Again the team provides resources such as access to experts and printed materials. Meanwhile the schools specify what they will become and begin to develop the means to do so. Thus, in contrast to the team

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development model, the sites develop their own curriculum, choose what kind of student groupings are appropriate, etc.

Given this approach, one might naturally expect that progress toward full demonstration will vary by site as each site makes decisions about what transformation means. Much of the development and demonstration will depend on local capabilities which varies across sites. Because the site chooses the path of reform and the pace of change in accordance with its capabilities, one would expect there to be little conflict between the team and the sites. This approach does not require clear understanding at the beginning of the effort between the design team and the site, except that the local site must understand that it is responsible for the development of this design.

This site diversity and slow pace will not diminish in Phase 3. The intention of these teams is to always be process designs.

Design Team Specified and Locally Developed

A final group of teams, including CON, EL, LALC, MRSH, will take major responsibility in specifying the design, but will rely on the sites to further develop the models, curriculum, assessments, assignments, etc. These teams tend to have fairly specific parts of the design as evidenced in the proposal and design documents through 1994. For example, CON requires the school to reorganize into multi-year, multi-age groupings, use a project-based curriculum, use CON standards, and have specific computer supports. EL requires multi-year teaching, project-based expeditions with specific abilities included, development of master teachers, etc.

On the other hand, the demonstration sites are expected to develop the details of many of these elements. Three of the teams, CON, EL, MRSH believe that teachers must go through the process of curriculum development as part of their professional growth. They believe the process of matching standards, assessments, curriculum and instruction into a coherent whole not only builds expertise, but allows for buy-in. Teachers will not abandon what they themselves have developed. In addition, while these teams have specified that multi-age or multi-year groupings are a part of the design, they have not developed the exact

model to use. In Phase 2, demonstration sites will experiment with different approaches.

Like the locally specified and developed model, the demonstration will depend on the capabilities of the schools to develop the elements of the design. Thus, one should expect slow and non-uniform development. We note that this approach might potentially cause more confusion between the design team and sites than the other two approaches in the following sense. In this approach, the team sets the goals, tasks, and the pace, but the sites must do the development. Unless this is clearly understood, sites might be confused as to the expectations for their role.

The expectations for Phase 3 of these teams is that the development effort would be largely complete and that new sites would not undertake the heavy development load of the demonstration sites. However, those who believe in teacher creation of curriculum as part of a step in professional development will always include this "developmental" activity. Even so, teachers at new schools presumably would be aided by more models, materials, and example lessons from the demonstration sites, than were available to the demonstration sites.

ROUTINE SCHOOL REFORM PROBLEMS

Finally, regardless of who is responsible for the specification and development of the design, routine problems affect every school reform effort. They are problems not peculiar to any design approach, but to the school environment. The literature illustrates the difficulty of completing social reforms because of what might be considered routine organizational occurrences.[14] With or without a reform agenda, leaders turnover in organizations, budgets are cut, taxpayers revolt, inclement weather or natural disasters strike, and courts issue decrees. In "normal times" these common occurrences can cause havoc in the organization. In "reform times" these occurrences have unpredictable effects on the pace and direction of change. For

[14]Mazmanian and Sabatier (1981) provide a list of some of these gathered from others work. Cases studies by Bodilly, Ramsey, Stasz, and Eden (1993) and Bodilly, Purnell, and Hill (1994) provide some recent examples of the effects of routine mishaps on reform efforts.

example, leadership turnover might sound like a disaster, but in fact new leadership might be even more supportive of reform. While unpredictable in nature, reforms must deal with the realities of these situations and have plans for ameliorating the impacts.

Three of the design teams have already experienced leadership turnover. At LALC, several members of the design team have been replaced: deputy director of LALC, the Los Angeles Unified School District Superintendent, and district budget chief. Similarly, at NA, one of the leaders left and was replaced by two co-leaders. The four founding organizations of AT turned over their managerial responsibility to a newly hired director. Other teams, such as EL, have shifted the relative responsibility among the team members to take advantage of different talents and to take into account other responsibilities.

All teams have already felt the pressures of budget constraints and slow progress toward important agreements between design teams and districts due to political or other disruptions. For example, LALC's site efforts began in the midst of major restructuring efforts in LAUSD and at a time when voters were considering partitioning the district. Because the district and union are partners in the design, these issues had to be worked out before parts of the design could move forward.

In several cases, designs have faced the additional challenge of creating new schools from scratch--a formidable task. Both CLC and EL have sites that are establishing new schools in existing buildings, hiring teachers, buying equipment and materials, and marketing the school to prospective students and their parents. The actions and energies involved in setting-up schools can drain energy away from the reform efforts and need to be considered in examining the implementation of the design.

IMPLICATIONS FOR NASDC EFFORT

The implications of this set of factors for the NASDC effort are not straightforward and remain to unfold. They will, however, certainly have an effect. Clearly, expectations for full demonstration should take into account the approach taken to the development task. Those teams relying on local specification and/or development can be expected

to proceed according to the capabilities of the sites and local variation should be expected. Those with these strategies might be more vulnerable to routine disruptions in school settings. Those teams that take on these two responsibilities will likely show more rapid progress with less expectation for site variation.

Subsequent documents will attempt to track how these approaches affected demonstration progress and how teams dealt with the all too common disruptions to school reform.

6. DESIGN TEAM READINESS

The design teams did not come to NASDC equally equipped to meet the demands for rapid development, demonstration, and then scale-up. Many factors affected their readiness to undertake the NASDC effort. We draw contrasts between the teams on four factors: whether the team was newly created, whether it needed to create a staff and structure to undertake the effort, whether the leadership of the team had to develop or be transferred, and the whether the team or team members as a group lacked experience in implementation of school level reform. These four factors intertwine with each other in the sense that a newly created team would have to build staff and develop leadership, while an existing one might have a staff and structure already in place.

It appears reasonable to expect that teams that faced the challenges involved in team building and that lacked experience at reform would make slower progress in Phase 2 than those teams that were on sound footing in terms of staff and structure as well as having strong implementation experience. Newly created teams would have to address team building and capacity issues prior to working with sites toward demonstration. This is a difficult, resource consuming task.

We have summarized the standing of the different teams at the end of Phase 1 in terms of these factors in Figure 6.1. Teams that faced many challenges in any of these areas were given a black block, while teams with some modest challenges were given gray, and teams with few or no challenges in this regard were given a white.

These four factors and their potential impact on Phase 2 are explored below. Finally, we add that several teams had funding difficulties in Phase 1 that left them less ready for initiating Phase 2 activities.

NEW TEAMS OR TEAM MEMBERS

The creation of a new team implies that the first year of the NASDC effort, and maybe other years as well, would have to be devoted to developing the team and its common vision, taking energy away from

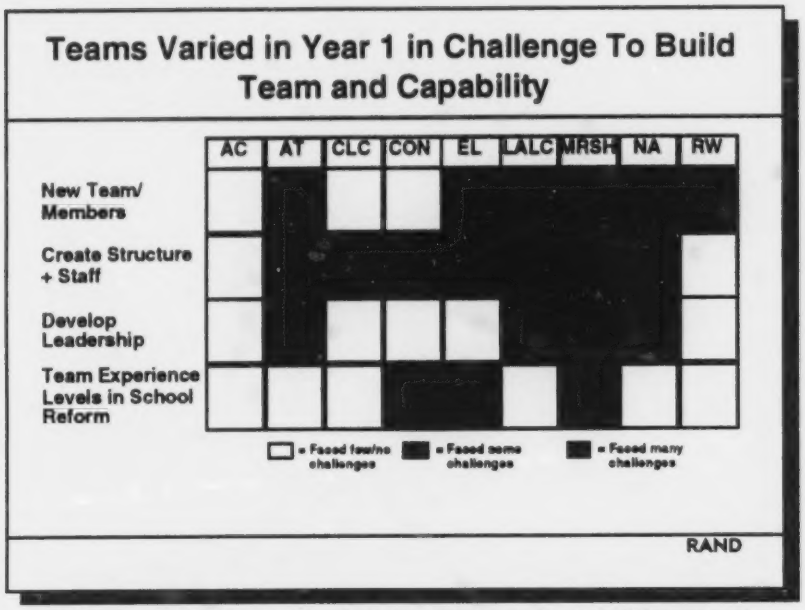

Figure 6.1—Teams Varied in Year 1 in Challenges to Build Capability

actual work at the demonstration sites. Already existing teams would be less likely to face this challenge and could begin the work of development and demonstration immediately. Therefore, teams that were newly created would face the additional challenge in Phase 2 of team building and could be expected, all other things equal, to progress more slowly.

Three teams, AC, CLC, and Bolt, Beranek, and Neuman the sponsors of CON, existed prior to the effort in actual fact as school change organizations and the members of the existing organizations were largely responsible for the proposals and will be responsible for the development work (white on Figure 6.1).

Two other teams, NA and RW, existed prior to the RFP as school change organizations, but have had changes in team memberships during the RFP process or during Phase 1. In the case of RW, the Success For All program of Johns Hopkins married with the State of Maryland and St. Mary's County to become Roots and Wings, but Johns Hopkins remained the core component of the team and is synonymous with Roots and Wings (gray in Figure 6.1). In the case of NA, an organization existed prior to the

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effort, but new partners were involved to respond to the RFP (black in Figure 6.1).

- Four teams were created in large part to respond to the NASDC RFP including AT, EL, LALC, MRSH. While they had preexisting "parent organizations", the birth of the design team corresponds closely to the time of the NASDC initiative. For example, the Hudson Institute is the parent organization of Modern Red School House, but MRSH was created by Hudson in partnership with others to address the NASDC proposal and Hudson had little school experience. We expect these teams will face additional challenges in the Phase 2 period (black on Figure 6.1).

CREATE A STAFF AND AN ORGANIZATIONAL STRUCTURE

A major task for the NASDC effort is to develop a staff capable of helping schools demonstrate the design and in Phase 3 of implementing the design. New organizations or small organizations geared to a more modest effort would face the challenge of building a staff and creating the structure by which the organization could work effectively with sites.

Two teams, AC and RW, had such staff and structures in place. The additional number of sites undertaken in the demonstration do not pose, on the face of it, major challenges to the staff and structure of these teams. They will have to grow, but have shown themselves capable of growth in the past. This does not appear to offer a major challenge to them (white on Table 6.1). Another preexisting team, CLC faces a more significant growth challenge due to the number of sites involved and the need to grow school level intervention structures (gray on Table 6.1).

Obviously, the newly created teams, AT, EL, LALC, MRSH will face the full challenge of developing the staff and the structure to intervene in schools. In addition, two other teams, CON and NA, face the issue of developing significantly increased staff and structures. This is most keenly felt by NA which includes as sites multiple states, districts, and schools. (All six are black on Figure 6.1).

DEVELOP NEW LEADERSHIP

While the development of leadership is necessary to all teams, often the issue is solved during the creation of the team. The team leaders are those who created the team. However, in several cases those who created the organization and responded to the RFP, were not the ones destined to lead the organization. Discussions in Phase 1 indicated that the hand-off of leadership responsibility or the assignment of leadership responsibility was an issue for several teams.

For most teams this has not been an issue (AC, CLC, CON, EL, and RW). The leadership has been clear from the start and remains so, even though the relative functions of different leaders has shifted in Phase 1.

For three teams, AT, LALC, MRSH, this has been a major issue. In the case of AT and MRSH, the leaders that presented the proposal are not the same as those who now lead the development and demonstration effort. The organizational growth required that leadership be handed off to someone from outside the original organizations. In LALC, the recurring issue is the assignment of a head of staff who can take charge of the effort and manage the day to day realities of school reform issues. Political leaders abound on the team, but not administrative leaders. This issue remains unresolved at this point.

Finally, NA faces some modest challenges in this regard due to leadership turnover in Phase 1.

NATURE OF TEAM EXPERIENCE IN SCHOOL REFORM

The teams also brought significantly different levels of experience in school reform to the effort. Teams with less direct experience in designing, developing, and demonstrating in real schools would face greater challenges, all other things equal, than those with strong hands-on experiences.

Six teams had strong backgrounds in this area, AC, AT, CLC, LALC, NA, and RW. In each of these cases, the team itself had implemented school changes in the past (AC, RW) or several important members brought this experience to the team (AT, CLC, LALC, NA).

Two other teams faced some modest challenges in this regard. Both CON and MRSH had more limited school implementation experience when compared with the others.

In contrast with all others, EL had the least experience in this field. A newly created team, the parent organization, Outward Bound, had only recently entered into the area of school reform. While several members had school experience, it was not equivalent to the deliberate reform efforts of the other teams.

FUNDING ISSUES

The strategy outlined in the NASDC RFP was predicated upon a funding level of $150 million to $200 million over five years. Design teams were encouraged to submit proposals that were not limited by funding constraints. However, as time went on it became clear that initial estimates of fund raising capabilities were too ambitious--a shortfall in predicted revenues would occur.

In the negotiations between design teams and NASDC in the summer of 1992 to develop contracts for the effort and again in 1993, design teams were forced to rethink their design in light of reduced funding.

The measures each team took varied, but two approaches were fairly common. First, most cut back immediately on the technology element of the design. Fewer funds would be available to cover the cost of hardware and software for the schools. One consequence might be limited ability of the designs to implement strongly individualized curriculum and instructional strategies because the technological means to schedule and manage individual students might not be available. Second, several design teams cut back on the number of implementation sites or pushed into the future any consideration of adding sites.

While this process affected all teams in some form or other, three teams had an additional problem to deal with that can be expected to affect demonstration progress. Three teams (AT, CLC, and MRSH) had contractual arrangements geared to the school year. Their plans for summer 1993 staff development and orientations sessions for the sites were grounded on the expectation of signing Phase 2 contracts in the spring of 1993. However, the funding and the contracts covering Phase 2

were slow to develop. Thus, these three teams had difficulty both planning for and implementing the summer orientation and development sessions with the sites that would be crucial to a smooth start-up. Interviews with these teams and their sites indicate that while the three teams scrambled to cover the summer sessions, they could not mount the effort each felt was needed. In turn, site level interviews indicated for some that this caused problems with establishing good initial relationships with sites.

IMPLICATIONS FOR PHASE 2 EXPECTATIONS

The above discussion indicates that the teams face different challenges in Phase 2 emanating from their readiness at start-up, regardless of the nature of the designs or approach taken to further specification and development.

Two teams, AC and RW, started the effort with existing and capable teams with strong school reform experiences. We would expect these teams to face few challenges in building the capability needed to demonstrate their designs in Phase 2. We note that these teams moved into their demonstration sites in Phase 1 and began the demonstration effort.

Two other teams, CON and NA, have some challenges to face in this regard, especially the further building of a staff and structure for school level intervention. While CLC faces fewer challenges in regards to team building and capability, it had less funding available at the beginning of Phase 2 with which to further develop the design and move into schools.

Finally, five teams, AT, EL, LALC, MRSH, face Phase 2 with significant challenges regarding their readiness, when compared to the other teams. One should expect that these teams might be slower to proceed than the others and will have more difficulties meeting the tight NASDC deadlines for demonstration.

7. THE CHOICE OF DEMONSTRATION SITES

A detailed nature of the sites that the teams chose to work with in Phase 2 of the NASDC effort is beyond the scope of this report. Instead, we limit the discussion to two themes: the choice of number and type of sites and the approach taken to gain buy-in from the demonstration schools.

NUMBER AND TYPES OF SITES

The decision about the number and types of sites could prove to be crucial to demonstration in Phase 2. Several pitfalls could be possible. Working with a one or two sites might focus resources, but would also put a team at risk that some local circumstance could easily stall the effort. Working with many sites might dilute the resources of the team to affect the sites. Working with "highly challenged" sites, those in inner cites with low performance records, might prove to be more difficult than working with "less challenged sites," those in suburbs with stronger past performance. Teams needed to balance these concerns to ensure at least one, if not more, demonstration sites by the end of Phase 2.

A review of the decisions made by the teams show the choices resulted in three groups.

Modest Portfolio Approach: Four teams chose a modest number of schools to work with, between three and 20, (AC, AT, EL, and RW) and their sample of sites included schools of varying demographics. These teams included a mix of schools with large percentages of children on free and reduced lunch, poor past performances, and in very urban and rural settings as well as some schools with fewer number of children on free or reduced lunch, better performances, and in more suburban settings.

Two other teams (CLC and MRSH) started out with intentions to demonstrate in significantly more sites, but in Phase 1 reduced the number of sites for demonstration in Phase 2 to a modest number in keeping with the others using this approach.

A modest number of schools of varying backgrounds potentially increases the likelihood that at least one of them will have a high payoff in terms of demonstration.

All the Eggs in One Basket Approach: In contrast two teams, CON and LALC went with two schools each. All schools in their samples are inner city schools serving high portions of poverty level families. As with most inner cities, Boston and Los Angeles are prone to district level upheavals which have a high likelihood of affecting the progress of the two design teams. While, the approach focuses the resources of these teams on a limited set of nearby schools, the ability to demonstrate rests entirely on success in two schools in troubled districts.

Ambitious Approach: NA chose a more ambitious strategy. Its NASDC efforts cover partnerships with seven states, 25 districts and 81 schools, with roll-out to more schools during Phase 3. This type effort will require extensive resources and capabilities on the part of the team and runs an obvious risk of producing little change across many sites. On the other hand, it should be possible to produce significant change in at a least a few sites.

SITE SELECTION PROCESS

The process of selection and commitment of sites to work with had two chronological components: a search for likely sites, and the establishment of initial relationships and expectations. These did not vary in any systematic pattern among design teams. Below we describe the general nature of the process, but draw no expectations from it.

The Search Process

For the most part, the design teams identified potential sites in a common fashion. The design teams tend to have nationally known reformers as members and these members have networks of sites with whom they have long-standing relationships. The teams, quite naturally, searched among those sites that they were familiar with, had worked with before, or where they had colleagues or friends in the school or district. Design teams have explained that this search method was due

to the time constraints imposed by NASDC, the desire to work with familiar people, and the lack of funds in early stages to mount more vigorous searches. But design teams gave additional reasons for working with some schools. Most common was that the school was already implementing elements of the design and thus would be more likely to meet the deadlines set by NASDC. In addition, design teams actively looked for diversity among the sites in terms of students' characteristics and geographic location. For teams with just two sites this was not possible.

While the general method of search and selection was the same, the specifics varied.

- Two teams chose their schools before the proposal was submitted, relying on working relationships with representatives at the district or state levels (CON, RW).
- Four teams requested that interested schools, from a pool of familiar ones, submit an application to be considered for involvement with the implementation effort (EL, CLC, LALC, MRSH).
- Three teams relied on prior affiliations to choose the district to work with, if not the actual schools (AC, AT, NA). AC worked with the district, but chose the schools based on its own criteria. AT chose districts it was familiar with and the district chose the feeder pattern. NA allowed representatives of its states and districts to choose the individual schools in which to implement, a process which generally involved the submittal of proposals by interested schools.

Initiating the Relations

Once potential sites were identified, the design teams began initiating relationships. In four cases this relationship evolved primarily at the state or district level (AT, CON, MRSH, NA). Negotiations over the design and plans for demonstration were largely between the design team and district officials or in the case of NA with

state officials. Teachers were not directly consulted by the design team until well into the development year.

In the remainder of the design teams, while initial connections and discussions might have been made at the district level, a more extensive amount of discussion and deliberation occurred between the design team and teachers to ensure commitment (AC, CLC, EL, LALC, RW). Design team members visited schools, answered questions, and in some cases interviewed teachers to determine the level of commitment to the design and to familiarize themselves with the schools. Not only teachers, but also community members, were often involved with the discussions about whether or not to participate in the design implementation.

Most teams attempted to ensure early teacher support in some fashion. First, some arranged for all teachers who did not support adopting the design to be able to leave the school and find employment elsewhere in the district without loss of seniority or status (LALC, MRSH, RW). Second, some asked the teachers to vote on whether or not to join the effort and asked for a majority of the teachers to vote for the design before proceeding (AT, CLC, EL, LALC, MRSH, RW). Interviews with sites showed that this process was not consistent among schools associated with any single design team. For example, some AT schools did have a teacher vote, while others did not. The same is true for the other designs.

For the most part designs teams were dissatisfied with the unevenness and chaotic nature of the school level process for ensuring initial buy-in. Most teams have suggested that the Phase 3 process be more deliberate and include more teacher-level orientation and formal voting.

While design teams had one set of reasons for selecting sites, school personnel had their own reasons for wanting to become involved. School administrators and teachers cited the following reasons for becoming involved, given in the general order of the importance attached by the school members:

- additional financial resources given directly to the school,

- new technology provided by the design team,
- association with a reputable reform movement which would give the school the political clout to effect greater changes,
- access to experts and cutting-edge education reform practices, and
- association with well-known figures who could provide national recognition.

When questioned about their commitment, teachers stated that when they voted, they considered what they would receive from the design team. Few said that they considered what they would be required to do and contribute as a result of their involvement with the design. In general, teachers said they did not have a good understanding of the design or the work they would be required to do when commitment was made, even in those schools which had more extensive introductions to the design teams. They said the design partnership was presented, usually by the principal, as a way of getting funding and experts into the school and that is what teachers approved.

This general reporting of teachers about how they were approached holds true for team developed as well as co-developed designs. Many school personnel did not know that they would be responsible for a large part of the development of the design. Again teams voiced dissatisfaction with this and now would require more extensive introductions to ensure better understanding between teams and schools about the relative work involved in transforming the schools.

While this chaotic process might not have ensured strong initial buy-in from all school staff, it does not preclude commitment to the design. Strong commitment can be gained by going through the change process and we saw evidence of strong teacher commitment at many sites, even though the teachers say they did not initially understand nor buy-in to the design.[15]

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[15]Milbrey McLoughlin discusses this phenomena in "The RAND Change Agent Study Revisitied: Macro Perspective and Micro Realities", *Educational Researcher*, December 1990.

CHANGES IN SITES

By the end of Phase 1, several of the schools originally affiliated with a NASDC design are no longer involved with the teams. While the specific reasons varied, most can be summed up as a lack of buy-in or commitment on the part of the school or district to the design and its elements. Under the circumstances, the partnerships were dissolved. Specific reasons for dissolution include:

- The school agreed to implement only part of the design, wanting to ignore essential components.
- The local teachers' union expressed strong opposition to various components of the design.
- The school or district disagreed with the design team about resource allocations among the sites
- The school initially misunderstood the required level of effort and did not want to continue.
- Champions or leaders left and the rest of the staff became disinterested.

These experiences to date indicate that getting districts and schools to commit to demonstrate innovative, whole school designs for Phase 2 was not a simple task. The difficulties were compounded by the demand by some teams that sites act as co-developers. We note that schools initially associated with AC and RW, the teams relying on a team specified and developed approach, have remained with those teams. Clearly, the co-development undertaking involves quite a bit of work which some schools do not want to perform. In addition, the designs themselves might not appeal to all schools--local tastes, past experiences, and current funding pictures might all affect whether or not a school finds the design compelling and worth its while to pursue. Finally, initial buy-in during Phase 2 will not determine the final outcome. Commitment can be fleeting in organizations with turnover in leadership, fragmented authority structures, and changing circumstances.

IMPLICATIONS FOR PHASE 2

For the most part, we can deduce no implications for Phase 2 in the choice of sites. The selection process tended to be jumbled and somewhat chaotic due to NASDC deadlines. The teams did choose different numbers of sites and this might affect their ability to demonstrate with CON, LALC, and NA being most at risk of being affected by local circumstances or not having the resources to produce strong demonstration sites.

8. CHALLENGES FACING DESIGN TEAMS AND NASDC IN PHASE 2

This section sets out our conclusions from this baseline description as well as makes some observations based on the experience to date about potential issues that might arise in Phase 3.

CONCLUSIONS

NASDC set out to develop the capability of a diverse set of teams and designs to affect school reform. Our descriptions in this document indicate that it has accomplished part of this goal. We draw two simple conclusions.

First, NASDC selected and promoted through Phase 1 a diverse set of designs that include different approaches to reform as well as different strategies for how to demonstrate reforms in the Phase 2 period.

Second, the diversity of the design teams and designs should lead to different expectations for Phase 2 performance. Our analytic description of the designs leads us to a set of expectations about the comparative progress of teams during Phase 2.

Those teams with core focus designs, relying on further specification and development by the design team, strong indications of design team readiness, and a modest number of sites are more likely to do well in Phase 2 and emerge with strong demonstration sites. Two teams fit this description: AC and RW.

We think that teams with three or more of the following will show slower progress and this progress will vary significantly from school to school: comprehensive or systemic designs, local specification and development, challenges in terms of readiness, and concentration in a few schools or in many schools. Progress in the elements of governance, social service integration and staff organization will be particularly slow and vary across sites. Three teams fit this description: AT, LALC, and NA.

A group of teams falls somewhere between these two extremes having some challenges in several categories. These teams are CON, EL, MRSH,

CLC. All required significant local development approaches. Two, MRSH and CLC include systemic elements in the design. Three, CON, EL, MRSH had some indication of facing challenges to team readiness in Phase 1. Finally, CON is focusing all its efforts in two sites. We think these teams will have slower, less uniform development than those in the first category. Other challenges might also slow them down, but not to the extent likely for AT, LALC, and NA.

IMPLICATIONS FOR PHASE 3

It is too early to draw many conclusions from the design team demonstration experiences. However, based on our initial visits with the design teams and a sample of their demonstration sites, we want to highlight a few issues that we think will be important during Phase 3.

Our presumption is that NASDC will change strategies from Phase 2 to Phase 3. In Phase 2 is was an organization that helped developed school reform assistance teams. In Phase 3 NASDC will enter into agreements with a limited number of interested districts (five to seven) to transform schools in those districts using the design teams as assistance organizations. The Phase 3 strategy for NASDC offers districts and schools choices among assistance organizations and their designs. The fundamental tenet of NASDC is that bottom-up strategies do not work well because schools need assistance and visions for reform. But, NASDC also believes that reform should not be narrowly mandated from above. NASDC, by creating and sustaining assistance organizations, potentially offers a third strategy for school reform: a choice among nine different types of designs and assistance organizations with proven demonstrations.

However, given the nature of the teams and the demonstrations in Phase 2 we think that the following will be important considerations in that choice:

1. The teams varied in the nature of their designs, their different approaches to development, and their readiness in Phase 2. When combined with the short development time the designs will vary in

their ability to demonstrate a coherent picture of their particular reform to potential Phase 3 adopters.

Therefore, NASDC must find ways to help potential adopters understand and interpret the probable uneven pace of the teams and the important differences among them.

2. It is clear that the NASDC designs will require significant investments of resources, particularly for staff training and co-development. These resource requirements will vary by design team. Generally schools and school systems have limited resources to invest in the process of change. In Phase 2, NASDC has provided some of the investment funding for individual sites, the amount varying by design team. In Phase 3 and beyond, NASDC funds will be limited and investments by state and local authorities will be required.

NASDC and the teams must find ways to make clear to potential adopters the requirements for resources to be provided by the district, schools, or others. Clear understanding of the resource requirements and the differences among designs are necessary to promote informed choices by districts and schools.

3. No one believes that schools, even with the best designs, can achieve the national education goals by themselves. As we have noted, some of the designs require extensive interactions between the schools and other community actors.

Districts and schools must be made aware of the need for collaboration and time and energy involved in this. Districts that lack collaborative environments with non-education actors, might not be good choices for scale-up.

4. The designs require important changes in the administrative and policy system in which they are embedded. Design teams have limited capacity to address these systemic problems themselves and must work with districts to make changes.

Again, some districts will be more amenable to these changes than others and should be sought out for scale-up.

These observations are predicated on the NASDC strategy of a district choice among teams and then long-term assistance by teams. The

logic of this strategy implies a new step in education reform: the development and exchange of information, discussions, and perhaps negotiations between NASDC, districts, schools, and design teams. This challenge is now looming large on NASDC's horizon. It should not be allowed to obscure the important progress that has been made so far in the development of a new model for school reform. The design teams have created designs that have excited teachers, school districts, and students. They have begun the demonstration of these designs in some 140 schools across the nation. The design teams have assembled teams of dedicated personnel, both school-based and in their own organizations, who are devoting enormous energy to the task they have taken on. The first steps toward a significantly different approach to education reform shows promise.

A. DESCRIPTIONS OF DESIGNS

The following are descriptions of each of the designs, relying primarily on the elements defined in Section 2. The elements are used as appropriate. The design teams described their designs in fifty page documents and dedicated the development year to specifying the details of the designs. While these brief paragraphs do not do justice to the designs, we hope they capture some of the essential traits of each.

AUTHENTIC TEACHING, LEARNING, AND ASSESSMENT FOR ALL SCHOOLS (AT)

The design assumes that high performing schools are not possible in the current bureaucratic structure. The intent of the design is to move schools away from "the bureaucratic reality to the authentic vision" of education. The design aims to change the culture of the schools to promote high institutional and individual performance. Four beliefs about the purpose of schools drive the design. Schools are to:

- help students acquire valuable habits of heart, mind and work,
- help students develop deep understandings,
- use only activities that are developmentally appropriate, and
- create a community of learners.

Design Team Leaders: James Comer, Janet Whitla, Howard Gardiner, Sid Smith, Edwin Campbell, Theodore Sizer.

Governance: The concept of an autonomous pathway is the key to the design because it frees a contiguous group of schools from constructive governance structures. Equivalent to a feeder pattern that is coterminous with a community, the pathway must be self-governing, requiring formal changes in the governance structure of the district. Schools within a pathway will be formally governed by School Planning and Management Teams (SPMT). This team will be supported by school-level teams, a Community Health Team, a Teacher Team, a Parent Program, and a Student Program in each school. All will work to support the SPMT. Members will represent different important voices in the

community making governance more participatory. Decisions will be made by consensus with free, no fault discussion guided by a process developed by the School Development Program. The pathway will be governed by the ATLAS Communities Team (ACT) and use the same consensus processes.

Standards: Using the new governance structure each pathway will rethink what a high school graduate should be able to do. From this reconception, it will develop its own standards of performance for each grade level through the committees. Standards will be performance and outcomes based. They will be explicitly stated and public so that the community can join in judging the efficacy of the schools.

Assessments: The pathway creates exemplary exhibitions for graduates and benchmarks for key years. Assessments are authentic in that they must be demonstration and performance based. There is strong support for portfolios to be used over time to demonstrate student development and maturation.

Student Groupings: The design will promote multi-age grouping as appropriate and will avoid pull-out programs. Tracking will be avoided.

Curriculum and Instruction: The curriculum moves away from emphasis on accumulating a broad set of facts to emphasize in-depth understanding of the world. For example, in high school, many electives and lecture formats would be changed to fewer courses with more in-depth experiences. Curriculum is organized by themes called "essential questions." Answers to the questions are explored in an interdisciplinary fashion. Instruction is highly personalized with attention to individual capabilities and maturation rates. This is reinforced by a personalized school structure with reduced number of students per teacher.

Professional Development: Teachers become a stronger force in the school by creating their own professional development plans, being responsible for research and development of new curriculum and instructional strategies, and being members of the governance teams. Personalization will be promoted through opportunities for collaboration and support for training including networking among teachers.

Community Involvement: Ancillary services such as mentoring, speakers programs, and volunteers are provided by community members who become more active. Community members are active participants on the school governing teams and the schools develop programs to encourage parental involvement.

Integrated Social Services: Schools closely coordinate with social service providers through the Community Health team. Members from this team sit on the SPMT to ensure community health issues are heard.

Staffing: Schools commit to a fewer students per teacher such that a high school teachers would have no more than 80 students.

Technology: Computers will be used in the classrooms to aid in personalized instruction. They will also enable communication within schools and across the pathway, cementing the relationships needed to build a community of learners.

AUDREY COHEN COLLEGE SYSTEM OF EDUCATION (AC)

The design is based on a holistic approach to education centered in developmentally appropriate curriculum. Curriculum and instruction is organized around a single, developmentally appropriate purpose for each semester, cumulating to twenty-six purposes in a K-12 system. For example, kindergarten is dedicated to the exploration of "We build and family-school partnership" and "We care for living things." Embedded in each purpose are content areas such as English and math, and essential skills such as critical thinking and researching. Each purpose culminates in a constructive action taken on by the class to serve the community. These fundamental changes in the curriculum and instruction become the organizing principles for all other school activities. The total effect is intended to make the school and its programs more coherent and focused.

Design Team Leaders: Audrey Cohen, Janith Jordan.

Governance: Does not require significant governance changes other than those given to magnet or theme schools. However, significant governance changes can result from the incorporation of purposes as the focus of schooling.

Standards: The school will meet existing state standards, but every school will also have the standards developed by the Audrey Cohen College which align and support the purpose-driven curriculum.

Assessments: Although schools continue to use existing standardized tests as required by the district and state, the design team has also developed a framework of demonstrable abilities and skills for each grade. Teacher developed assessments are embedded in the curriculum and match the specific purpose of each semester. The team is currently working with the sites to develop outcome-based assessment criteria and strategies that incorporate community participation.

Student Grouping: Students will be grouped in way appropriate to the purpose and constructive action of each semester. The curriculum is intended to promote learning of all students.

Curriculum and Instruction: During each semester, students focus all learning and activities on a single pre-assigned purpose. Traditional subject areas and important skills are absorbed by action-oriented dimensions: acting with purpose; weighing values and ethics, understanding self and others, understanding systems, and making use of skills. The semester culminates in a constructive action that has been determined by the students and is directed toward improving the world outside the classroom. Secondary students serve internships in the community.

Professional Development: The team will provide continued development of teachers in the constructs of the design. Teachers, principals, and administrators organize their jobs around the purposes and begin to build bridges between the school and the outside world.

Community Involvement: The purposes help the school and its official to identify key community resources to involve in the educational enterprise. The constructive actions help bring the community into the school and the school into the community--making schools, parents and children active partners in improving the community.

Integrated Social Services: The design specifies that coordination with community and health service agencies is accomplished at the site level. The curriculum makes student awareness of health

issues and contact with health-related agencies an organic part of the curriculum.

Staffing: The design requires the creation of a staff resource position to gather materials and make contacts in the community, peer coach teachers in the classroom, and serve as a liaison with the design team. Teachers are responsible for planning the curriculum as a collaborative team. Administrators remove barriers to making the school more coherent and build bridges to the community to support the purposes.

Technology: Networked classroom computer centers, studios for television and photography, and other technology provide students access to information and the means for developing work products. Technology is also applied to the management of record keeping tasks.

THE CO-NECT SCHOOL DESIGN (CON)

The design calls for a dramatically different learning environment for students, teachers, and the community. The design is especially targeted at middle school children in urban settings; however, it can be applied to other grades and settings. In addition to understanding key subject areas, graduates of the Co-NECT schools demonstrate the acquisition of specific critical skills, identified as sense-maker, designer, problem-solver, decision-maker, communicator, team worker, product-oriented worker, and responsible, knowledgeable citizen.

Design Team Leaders: Bolt Beranek, and Newman associates: John Richards, Bruce Goldberg, Henry Olds.

Governance: The School Governance Council that includes teachers, parents, business/community representatives as well as administrators runs the school. In addition, the school design team provides local input concerning the implementation, performance assessment and accountability of the Co-NECT approach at that particular school. Finally, the Community Support Board fosters access to the local community in support of the Council and design team.

Standards: The team will develop its own standards with input from the community and with the aid of its associates at Boston

College's Center for the Study and Testing, Evaluation, and Education Policy (CSTEEP). Standards will exceed current expectations for middle schools students from urban areas.

Assessments: Separate performance assessment frameworks, developed in partnership with CSTEEP provide the basis for a continuing process of setting goals and measuring progress for individual students, groups, and the school as a whole.

Student Grouping: The school is organized into multi-age, multi-year clusters of students with the goal of low student/teacher ratios.

Curriculum and Instruction: The design features a locally-developed, project-based curriculum that is product-oriented and supplemented by seminars and workshops in skills and other areas. Curriculum will be multi-disciplinary and will use cluster-wide investigations. Students follow a personal growth plan developed by teachers, parents and the student.

Professional Development: Professional development is viewed as an ongoing process. Co-NECT teachers promote their own professional development and have access to a network of professional development services and materials. Professional development will be project oriented with teachers learning by doing.

Community Involvement: A community support board will help the school interact with the community at large. Mentoring and volunteering are encouraged and community input sought for standard setting.

Integrated Social Services: Counseling and referral will be provided. Teacher teams will work closely with students to provide support.

Staffing: The school will have fewer students per teacher and teachers will remain with students for two to three years. Staff will be organized in multidisciplinary teams in houses.

Technology: A technological infrastructure supports student access to knowledge and local, national and global resources, the creation of student products, and the management of personal growth plans, resumes and portfolios.

COMMUNITY LEARNING CENTERS (CLC)

Community Learning Centers are predicated on the school site operating completely independently from any governmental structure in the areas of budget, staffing, and program. The school is organized into centers and the curriculum and instruction is developmentally based and attuned to students' personal needs. The school becomes a center for learning for all members of the community and promotes access to community services.

Design Team Leaders: John Cairns, Wayne Jennings, Joe Nathan, Elaine Salinas.

Governance: CLC design is predicated on the need to break the chains of current bureaucracy through an institutional by-pass. This translates into very significant site-based decisions, possible at this time only in charter, contract, and reservation schools, or in districts that agree to meet CLC's stipulations. Thus, the design centers around the support of these schools requiring full autonomy over budget, and the hiring and firing of teachers. The CLC schools would be governed by a site-based council with a collaborative approach to decision making. Over half of the CLC budget goes directly to its sites to support front-end needs for capital and to promote professional development.

Standards: The design does not propose the development of a unique set of standards, but insists that all students be held to the same standards that emphasize the demonstration of competencies or performances. These outcomes based standards are intended to be explicit, meaningful, and measurable. The design pledges to ensure all students have a 75 percent competency rating on existing Minnesota tests and that all students will move 25 percentile points on standard measures. The design does promote a standard for ethics as an essential part of character development. This will be developed through close interaction between the student, the school, and the community.

Assessments: It focuses on the more effective use of different assessment techniques to ensure school accountability, teacher accountability, and accurate student assessment. It proposes five different types of assessments be used to fulfill these different

functions. Assessment of students will be more performance based and move away from seat time requirements.

Student Grouping: The design uses groupings appropriate to the learning tasks in a flexible manner. It will emphasize multi-age, multi-year groupings with few pull-outs.

Curriculum and Instruction: The design keeps traditional subjects, such as English, math, history, and science, while it promotes more interdisciplinary, project-based curriculum and higher order thinking skills. The point is not to invent new curriculum, but to deliver it in ways which make it meaningful to children (instructional strategies). The curriculum emphasizes civic responsibility with students becoming proactive in their communities. While not requiring specific changes, the curriculum would evolve using modern instructional strategies to be quite different than the current Carnegie units. As such, the design requires working with the university system to create new college entry requirements.

A major focus of the design is on the development of new instructional strategies guided by modern principles of learning which call for "brain-based learning" and when implemented will dramatically increase the learning of all children. It talks of a paradigm shift from "teaching" to "learning" with student centered instruction and students being responsible for planning their own curriculum. CLC schools would have a Personal Learning Plan (PLP) for each student, emphasize competency based education, promote contextual learning and applied real-life problem solving in areas of interest to the child, pay attention to learning styles and the emotional aspects of learning, and maximize the effective use of technology. Multiple forms of exploration and expression would be used to increase the likelihood of learning.

Professional Development: The design makes strong statements about the need for autonomy to support differentiated staffing and alternative certification to meet the twin goals of: equal or less cost than other schools, and an increased staff to student ratio required by "brain-based" instructional strategies. Teachers develop professional learning plans in conjunction with a school-wide plan. Each school must commit to giving every teacher 20 days of training a year.

Community Involvement: Schools would be open 24 hours per day to serve adults as well as students. The design has facilities plans to translate this into a reality with different learning stations located throughout the building. As part of this effort, the team works with the media to increase the attention paid to academic achievement in CLC communities. A collaborative approach is encouraged.

Integrated Social Services: A major thrust is that schools become community centers for learning. Social services would be co-located and coordinated through the schools with special emphasis on pre-school services to ensure children are ready to learn.

Staffing: The intent is for schools to use autonomy over internal resources to significantly restructure the staff and substitute instructional aides or volunteers for teachers. Older students will guide younger students in their studies.

Technology: The design requires substantial use of computers for student assignment and PLP management, tracking assessments, and for individualized instructional strategies. Computers and other technologies are used in an integral manner to support learning.

EXPEDITIONARY LEARNING (EL)

The design intends to engage students and revitalize teachers through a teacher-guided, project-based approach to instruction that promotes academic, character, and physical development. The design views schools as institutions that share with families and community in the responsibility to develop students' character and values. Included are ten design principles of learning such as students competing against themselves instead of each other to produce a personal best product.

Design Team Leaders: Meg Campbell, Greg Farrell, Diana Lam.

Governance: The design does not require any formal changes in the governance structure, but does advocate a decentralized power structure adopting a web management approach by which administrators provide resources and coordination to assist the specific needs of teachers and the school. School based management is encouraged.

Standards: Relying on existing national efforts to create standards for various disciplines, the design team is in the process of

developing performance standards in the following categories: communication; quantitative reasoning; character and work habits; scientific thinking and technology; cultural, geographic and historical understanding; arts and aesthetics; and fitness. Each student must complete a senior project.

Assessment: The design calls for authentic assessment, including performance-based exhibitions, student portfolios, and student self-assessment.

Student Grouping: The design eliminates student tracking and mainstreams special education students. Using a multi-year approach, students stay with the same teacher for two to three years in order to create a more stable teacher-student relationship and to keep the teacher better engaged through the change in grade level every year.

Curriculum and Instruction: The curriculum is based on interdisciplinary, thematic projects, called expeditions, that last from three weeks to a semester. Developed by the teachers who serve as guides rather than repositories of knowledge, each expedition contains intellectual, physical, and service components. Expeditions take place both inside and outside schools and make up about half of the school day. Students continue to receive course work, especially in reading, math and other basic skills areas.

Professional Development: Staff development is considered the key activity to building a curriculum. The design approach emphasizes treating teachers as professionals by empowering them to create expeditions. Staff development is built around activities that increase the confidence and enthusiasm of teachers to become learners themselves and that provide teachers with resources and ideas to build curriculum.

Community Involvement: Community involvement is promoted through the off-site nature of the expeditions, the requirement for community service as part of the curriculum, and the need for internships by students. Mentoring and volunteering are promoted.

Integrated Social Services: The design includes a variety of on-site services. The design team intends to re-examine and modify this element in the spring, promoting a more site specific approach to such linkages.

Staffing: Schools will use master teachers and increased teacher differentiation to accomplish their professional development goals. Teachers will be on three year contracts to match the three years cycle of multi-year groupings. After each cycle teacher can choose to continue or leave. This is intended to promote teacher self-assessment as well as to promote the entry and exit of non-traditional, or uncertified teachers. Professional apprenticeships will be encouraged.

Technology: Technology will be incorporated as appropriate.

LOS ANGELES LEARNING CENTERS (LALC)

The design is predicated on the assumption that because public funding for students most at-risk is stretched and unlikely to increase, urban schools need to change in order to meet the special needs of all children. To accomplish this those closest to the child--and who are most accountable--should be given three things: control of budget and resources, performance assistance, and sufficient time to do what needs to be done.

Design Team Leaders: Peggy Funkhouser, Harry Handler, Chris Gutierrez.

Partnership: The Los Angeles Education Partnership (LAEP), a non-profit dedicated to the reform of public education, was the convener of the design team. This design team is unique among NASDC design teams because its leadership includes the Superintendent of Los Angeles Unified School District (LAUSD) and the President of the United Teachers of Los Angeles (UTLA), and LAEP.

In addition, the design team includes the Senior Vice President of KCET (local PBS station); UCLA and its Center for Research and Evaluation, Standards and Student Testing (CRESST); USC; LEARN leadership; five corporate partners; exemplary teachers; activist parent leaders; and a principal implementing site-based management. LAEP is the fiscal and project manager for the project.

Governance: Governance is based on participatory democracy, collaboration, and sound management. Each learning center is expected to convene a Town Hall for discussion and to elect a site-based Management Council. The management council is the decision-making body

for budget, personnel, curriculum, community relations, and student rights, and conducts the annual performance review for the Chief Educational Officer (CEO). Learning centers will be supplied with software to support fiscal management.

Standards: The design will make use of the "highest and most nationally recognized" available standards.

Assessment: CRESST will design a comprehensive student assessment system to improve performance and monitor program effectiveness.

Student Grouping: The design relies on multi-age groupings. The concept of the moving diamond can also be considered a different type of grouping for students promoting interactions with adults, teachers and peers.

Curriculum and Instruction: Curriculum combines content areas, skills, and behaviors. Content areas include: math, science, geography and history, English-language arts, and the arts, health and fitness, and second language. Skills and behaviors include: effective communication, problem-solving, critical thinking, social cooperation, self-discipline, responsible citizenship, and a life style that values wellness and aesthetics. Curricula for grades 11-12 include job preparation and advanced academic studies. Instruction is expected to reflect current cognitive theories of learning and intelligence, motivations, and individual differences. The designers advocate the following methods: thematic and interdisciplinary instruction, team teaching, and multi-age classrooms. Teachers receive a prototype "tool box" or library of resources, including curricular units and assessments, that they can use as models to develop their own instructional materials.

Professional Development: The professional development plan involves intensive multi-day training institutes (offered during teachers' off-track weeks) and weekly 1-2 hour training sessions. Much of this is collaborative small group work with clusters of teachers modeling and coaching each other. Teachers have two hours of pupil-free planning time each week (on the same day, permitting collaborative work). Management training will be provided to the site leadership team.

Community Involvement: Each student is provided with mentors or advocates from among older children, parents or community volunteers, and teachers. These advocates form a team called a "moving diamond" to support the child in his or her educational goals. Town meetings provide parents a voice in the school.

Integrated Social Services: The health and social services integration component was rethought over the last year. In its newer version health and social service integration is thought of as an "enabling" activity linked to changing instruction. Enablers include resource coordination, crisis/emergency assistance and prevention, student and family assistance, community outreach and volunteer recruitment, home involvement with schooling, and classroom-focused enabling. The designers expect this model will help to (1) increase the capacity of student services by connecting school-based services, e.g. school nurse, attendance and truancy, various psychological services, with community-based agencies providing similar services; and (2) link what is done by social and health service providers with what occurs in the classroom.

Staffing: Not specifically addressed, except that there will be lead teachers. The participation of the teacher's union helps ensure that organization and staffing issues will be addressed in a collaborative fashion.

Technology: Guiding principle: technology is a tool to be used. Learning Centers employ technology for instruction, communication, and data retrieval purposes. The project includes establishing a "product development" technology center in the school for use by students and the community. Teachers receive notebook computers which they are trained to use as a "creation station" for their tool box products.

MODERN RED SCHOOLHOUSE (MRSH)

Guiding the MRSH design to "break the mold" of American schooling are several principles and assumptions. They include the following:

- six National goals for education;
- all students can learn;

- a common culture which is represented by a core curriculum and SCANS generic competencies;
- principals and teachers with the freedom to organize instruction;
- schools accountable through meaningful assessments;
- use of advanced technology to achieving results; and
- choice in attending a MRSH.

Design Team Leaders: Sally Kilgore, Leslie Lenkowsky.

Governance: The designers require a school plan and school-level autonomy in the areas of budgeting, hiring and staffing, and outsourcing of services. Multiple teams within the school ensure more teacher participation and the participation of those outside the school.

Standards: The design develops its own unique set of world-class standards for all students that reflect high expectations associated with Hirsch's cultural literacy curriculum for students in the elementary grades and with SCANS competencies and Advanced Placement tests for students in the intermediate and upper grades.

Assessments: Student performance is measured by various assessments, including tests, watershed assessments, and embedded assessments. Schools are expected to adopt MRSH's standards and assessments.

Student Grouping: Design promotes multi-age, multi-year groupings with few pull-outs. New instructional strategies will promote individualized instruction and multiple regroupings during project work.

Curriculum and Instruction: The design advocates a curriculum founded on Core Knowledge. Core Knowledge will account for about 50 percent of the curricula, allowing leeway for a school's own curricular emphasis. The elementary students make use of Hirsch's Cultural Literacy curriculum which is sequenced in a year-by-year fashion. During the second year of Phase 2, the design team plans to develop curricular frameworks for intermediate and upper grade students that reflect MRSH world-class standards. The design conceives of teachers reorganizing instruction thematically across grades, integrating across subjects, and making use of computer technology. Hudson Units are a means to

"capture" curricular units and connect them into a holistic system of standards, assessments, content, resources, and pedagogy. Students' performance on a "collection" of Hudson units is expected to add up to mastery of MRSH world-class standards. The meaning of "Hudson unit" has evolved over the past six months. Teachers develop Hudson units with guidance by the design team.

The design advocates the more flexible use of time so that all students can meet standards. Instruction would be self-paced. Students would be in heterogeneous, multi-aged clusters with the same teacher for several years. Instruction would emphasize methods to promote student problem solving and thinking. Acknowledging that all students are capable of learning, albeit at different paces, the MRSH design calls for students to engage in self-paced learning and to organize their learning efforts in accordance with an Individual Education Compact (IEC) negotiated by the student, parents, and teacher.

Professional Development: The designers conceive of a two-part strategy. The first strategy calls for MRSH to train teachers to implement core features of the design. The other strategy is establishment of a self-sustained professional development program designed at the school-level. The details of these strategies are not fully developed; they are to be developed by consultants.

Community Involvement: This is not a heavily emphasized element in the design.

Integrated Social Services: Based on assessment of a school's community, implementing schools are expected to engage social agencies operating locally to assist "at-risk" pre-K though grade 12 students. This is a district responsibility, although an expert consultant will facilitate site efforts. The school's primary emphasis will be on education. It is expected that community services agencies will provide their primary emphases.

Staffing: The designers advocate a MRSH teaching force comprised of adults from a wide variety of backgrounds made possible by (1) implementing school autonomy over teacher selection and hiring, and (2) curricular change.

Technology: The designers scaled back technology in response to a budget cut (by NASDC) late Spring 1993. The resulting strategy includes a school-wide computer network and installation of multi-use microcomputers in classrooms. Teachers will use classroom computers to track students' progress through Hudson Units and Individual Education Compacts. Students will use the computers for instructional and information access purposes.

NATIONAL ALLIANCE FOR RESTRUCTURING EDUCATION (NA)

Instead of promoting change school by school, the National Alliance provides a framework for all levels of the education system (state and local education agencies as well as schools) to support restructuring of schools. The vision is based on the belief that systemic change requires a combination of top-down and bottom-up strategies. The Alliance combines member sites and outside experts into a networked umbrella of unifying tasks and goals. The anticipated scope of the effort is to eventually include about 12 percent of the national student population.

Design Team Leaders: Judy Codding, Marc Tucker.

Standards and Assessments: All National Alliance sites are members of the New Standards Project (NSP), a collaboration of the National Center On Education and the Economy, the National Alliance, and the Learning Research and Development Center at the University of Pittsburgh. The effort goes beyond the National Alliance with a total of 20 states signed on to the Project. NSP is both developing new standards as well as incorporating existing high standards in an outcomes-based system of assessments.

Alliance sites agree to keep indicators of progress known as Vital Signs to measure whether sites are moving toward the goals of systemic change. Two kinds of measurement are being developed: changes in terms of student performance and indicators of changes in student experiences.

Learning Environments: The design sponsors a number of initiatives aimed at enhancing the curriculum, professional development strategies, and instructional resources to increase learning in school. The task is an amalgamation of what used to be three separate components

of the design: curriculum and instruction, school to work focus, and technology as an important part of instruction. The task is intertwined with the NSP in that learning outcomes provide the starting point from which teachers develop units of study that are shared across the Alliance schools. Fundamental to the task is the emphasis on improving the learning environment through professional development opportunities that involve direct interactions among participants and with experts outside the school through a variety of networking devices.

Integrated Social Services: Alliance sites are tasked with developing better ways to integrate health and human services with the schools to serve children's emotional, physical and academic growth. The task is outcomes based, keyed to agreed upon descriptions of what communities and schools want for children, such as students coming to school ready to learn.

High Performance Management: Alliance sites adapt for education the principles and techniques developed by American business known as high performance management. These include strategic management, human resources management, Total Quality Management (TQM), decentralized decision making and empowerment, and accountability and incentive systems. At the school level, principals are trained in these areas to better support the integration and implementation of the design tasks.

Community Involvement/Public Engagement: Alliance sites at the state, district and school levels are tasked with developing methods for informing and involving parents and the public in the school and restructuring process.

Evolving Design: The specific activities subsumed under each of these tasks continues to evolve; none are in a finished form. For example, a number of activities this year are designed to develop a school to work plan and begin working on designs for the high school of the future.

ROOTS & WINGS (RW)

The design is intended for elementary schools with fairly large allocations of Chapter I funds. The Root component of the design intends to prevent failure. It emphasizes working with children and

their families to ensure that children develop the basic skills and habits they need to do well in succeeding years. The Wings component emphasizes a highly motivating curriculum with instructional strategies that encourages children to grow to their full potential and aspire to higher levels of learning. The means to accomplish both components lies in manipulating existing resources in the school, especially Chapter I funds, to provide better instruction.

Design Team Leaders: Robert Slavin, Nancy Madden.

Governance: The design encourages, but does not require site-based management under a school improvement team, with the principal acting as CEO. The design relies on the ability of the school to control internal allocations of resources, especially federal and state funds, and staff positions. This requires some understanding between the school, district, state, and federal government about the use of funds. The design team has found few legal barriers to the arrangement.

Standards: The design goal is to improve the performance of all students, by raising the average performance, and reducing the number of low performers. The design relies on Maryland state tests now in development.

Assessments: Assessments will be increasingly performance based with hands-on demonstrations and portfolios. The strategy is to position Roots and Wings schools to perform increasingly better on assessments evolving as part of a national move toward improved outcomes, rather than to develop a set of assessment tools unique to Roots and Wings.

Student Grouping: Pull-out programs will be eliminated as special teachers, volunteers, and others work in the classroom or after school with students who need additional help. During some parts of the day homogeneous groupings of students will be used for developing specific skills, say reading skills. Rather than permanent assignment to a group, each student will be assessed and reassigned to new groups as appropriate every eight weeks. The idea is to provide individual attention to those who need it so that they can move from one group to another as they progress. Groupings for math would be different than groupings for reading. During World Lab and other parts of the school

day, children will be in heterogeneous groups working in problem-solving modes.

Curriculum and Instruction: The structure of the curriculum will change to encompass three components. First, the schools will use an improved Success for All component for reading and writing skills. The design team is also providing a math component modeled after the reading component and incorporating new standards from NCTM. Finally, much of the rest of the day will be devoted to an interdisciplinary, hands-on component called World Lab which integrates science, social studies, math, language arts, and key skills. Instruction will change dramatically. The problem solving modes and group learning process will require different teacher instructional styles moving away from lecture formats to that of a guide. Learning will become more activity based.

Professional Development: The role of the RW facilitator after implementation is to provide release time to teachers, assemble materials, observe their instruction and suggest improvements, and to model the design elements.

Community Involvement: The family support coordinator is responsible for developing volunteers in the schools, structuring the before school and after school programs to address individual needs, making home visits to families with children in need, and in general ensuring that children come to school ready to learn.

Integrated Social Services: The focus of ties to the family and community services is on infants, toddlers, and school-age children. Social services will be coordinated through a site-based team run by a family support coordinator at each school (possible through the reallocation of Chapter I funds) and facilitated by a district move toward more integrated services.

Staffing: The design includes two new staff positions in the school: the family support coordinator, described above, and a Roots and Wings facilitator to ensure the design is established and maintained.

Technology: The instruction requires additional computer and other resources to provide students with access to hands-on, instructional software and educational resources. However, computers are not a central piece of the design.

B. DESCRIPTION OF THE SITES

The characteristics of the first set of sites is important for understanding the implementation of each of these designs, and will be of particular interest to potential adopters of NASDC designs. The following paragraphs describe the NASDC sites.

The nine design teams have enlisted 138 schools to implement and test the designs. However, the number of schools involved with each design varies considerably (see Table B.1). National Alliance brings the greatest number of sites: 65 schools. Los Angeles Learning Centers and the Co-NECT have the fewest, one and two schools, respectively.

Representativeness of NASDC Schools

The NASDC designs reflect the array of characteristics seen in the general population of schools, but do not exactly match national averages. Indicators for comparisons are: geographic setting, grade levels covered, size, and poverty level.[16]

Table B.1

Number of Schools by Design Team

	Elementary	Middle School	Secondary	Other[17]	Total
AC	5	1	2	0	8
ATLAS	7	3	3	0	13
CLC	2	1	0	4	7
CON	1	0	0	1	2
EL	5	2	2	3	12
LALC	0	0	0	1	1
MRSH	18	5	3	0	26
NA	32	12	15	6	65
RW	4	0	0	0	4
TOTAL	74	24	25	15	138

[16]All of the NASDC information presented here is current as of the fall of 1995.

[17]The "Other" category includes K-8 and K-12 schools as well as one K-10 school.

Twenty-nine percent of the schools affiliated with NASDC design teams are located in rural areas. This proportion is comparable to the national figure or 27 percent.[18]

In addition, 54 percent of NASDC schools are at the elementary level, including no grade higher than six, compared with 50.1 percent nationally.

The average size of elementary schools[19] differs from the national average. The average size of NASDC elementary schools is 534 students, while the national average is 458.[20] At the secondary level,[21] the difference is even more significant. The average size of NASDC secondary schools is 933 students, while the national average is 678.[22] The range of NASDC school size is quite large in both levels. The smallest elementary school has only 50 students, while the largest has 1900. Similarly, the smallest secondary school enrolls 69 students while the largest enrolls 2181.

The NASDC design teams have chosen a set of schools which have a higher poverty level than the national average. While the NASDC average for students receiving free lunch is 40 percent, the national average of the percentage of students receiving free and reduced lunch is 32 percent.[23]

Design Team Average Compared to National Average

These NASDC averages are skewed by the dominance of the National Alliance (schools involved with the National Alliance account for over

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[18]National Center for Education Statistics, *Digest of Education Statistics 1993*, US Department of Education, Office of Education Research and Improvement, NCES 93-292, p. 70.

[19](Includes schools beginning with grade 6 or below and with no grade higher than 8.) Middle schools are categorized as secondary schools. (Definition from the *Digest of Education Statistics 1993*).

[20]National Center for Education Statistics, *Digest of Education Statistics 1993*, US Department of Education, Office of Educational Research and Improvement, NCES 93-292, 1993, p. 106.

[21]Includes schools with grades no lower than 7. Middle schools are categorized as secondary schools. (Definition from the *Digest of Education Statistics 1993*.)

[22]National Center for Education Statistics, p. 107.

[23]National Center for Education Statistics, p. 383.

half of the NASDC schools). Thus, a more detailed design level view is provided.[24]

While most of the design teams are implementing their designs in a wide range of settings, three have not chosen any schools located in rural areas: CON, EL, LALC. In contrast, RW is affiliated with no urban schools, and one small city school. All of the teams have implemented their designs in elementary schools, while three presently are not involved with secondary schools: CON, LALC, RW.

The average sizes of elementary schools[25] for each design team are close to the national average with three exceptions: Audrey Cohen elementary schools are slightly larger than the national average, and the CON and CLC schools are slightly smaller than the national average. The LALC team, working with a combined elementary/middle school, is the only team which deviates significantly from the national norm. Figure B.1 graphs the average number of students in each design team's elementary schools. The horizontal line indicates the national average.

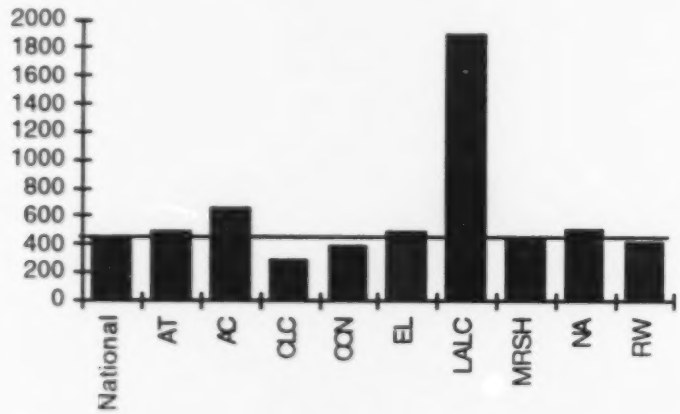

Figure B.1—Average Size of Elementary Schools, by Design Team

The range and average size for each design team's elementary schools fall within the expected range, with the exception of CLC

[24]The data for the MRSH schools in Charlotte were unavailable at the time of this report.

[25]See footnote 10.

schools which are small and the LALC school which is quite large (see Table B.2). All of the design teams cover a wide range of elementary school sizes, except CON and LALC, design teams involved with only two and one schools, respectively.

Table B.2

Number, Range, and Average Size of Participating Elementary Schools, by Design Team

	Number	Minimum	Maximum	Average
AT	7	146	749	479
AC	5	375	954	650
CON	2	348	420	384
CLC	3	92	635	280
EL	7	337	922	483
LALC	1	1900	1900	1900
MRSH	18	293	543	458
NA	36	175	942	505
RW	4	276	622	423

Greater variations in design team averages are seen in secondary schools than in the average size of elementary schools. The average size of secondary schools[26] of three teams (ATLAS, MRSH, and NA) are more than 200 students above the national average. The average size of schools involved with CLC and EL are more than 200 students below the national average. It should be noted that the CLC figure represents only one middle school. Figure B.2 graphs the average size of each team's secondary schools. The horizontal line represents the national average. CON, LALC, and RW have been excluded from this graph because they are affiliated only with elementary schools.

[26]See footnote 10.

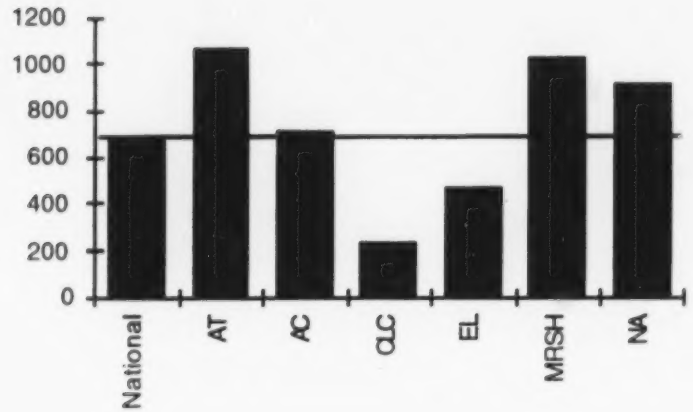

Figure B.2—Average Size of Secondary Schools, by Design Team

Table B.3 shows the range and average size for each design team's secondary schools.

Table B.3

Number, Range, and Average Size of Participating Secondary Schools, by Design Team

	Number	Minimum	Maximum	Average
AT	6	297	2181	1067
AC	3	589	950	713
CON	0	0	--	0
CLC	1	235	235	235
EL	5	168	576	460
LALC	0	0	0	0
MRSH	5	505	1361	1020
NA	27	69	2100	912
RW	0	0	0	0

Most of the design teams are involved with schools with a higher poverty rate than the national average. Only one design team's school averages fall well below the national average: MRSH. The average percentage of students receiving free lunch in the schools affiliated with LALC, CON, and AC are at least 100 percent higher than the national average. Figure B.3 graphs the average percentage of students receiving

free lunch in each of design team's schools.[27] Again, the horizontal line indicates the national average.

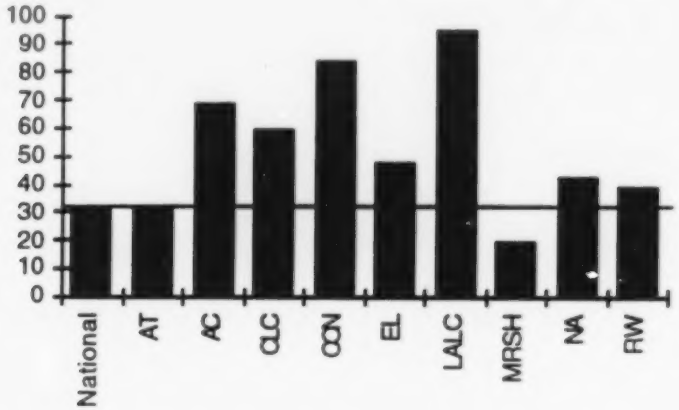

Figure B.3—Average Percentage of Students Receiving School Lunch, by Design Team

SUMMARY

In general then, the teams chose a set of schools representative of a cross-section of the nation's schools. The implementing schools represent the range of settings, sizes, and socio-economic status with two exceptions. Both the average size of CLC's elementary and secondary schools are lower than the national average. This is because of the nature of the CLC design--the team is working with several charter schools which are in their first year of implementation and are expected to be small.

[27]The figures for CLC and RW represent combined totals for students receiving free and reduced lunch, and are therefore slightly inflated.

BIBLIOGRAPHY

Berman, Paul and Milbrey McLoughlin, *Federal Programs Supporting Educational Change, the Findings in Review*, RAND, Santa Monica, 1975, R-1589/4-HEW.

Bimber, Bruce, *The Decentralization Mirage, Comparing Decisionmaking Arrangements in Four High Schools*, RAND, Santa Monica, 1994, MR-459-GGF/LE.

Bodilly, Susan et. al., *Integrating Academic and Vocational Education: Lessons from Eight Early Innovators*, RAND, Santa Monica, 1993,R-4265-NCRVE/UCB.

Bodilly, Susan, Susanna Purnell, and Paul Hill, *A Formative Assessment of the General Electric Foundation's College Bound Program*, RAND, Santa Monica, 1994,MR-463-GEF.

Goodlad, John, *A Place Called School*, New York, McGraw-Hill Book Company, New York, 1984.

Gross, Neal, Joseph Giaquinta, and Marilyn Bernstein, *Implementing Organizationl Innovations*, Basic Books, New York, 1971.

Liberman, Ann, et. al., *Early Lessons in Restructuring Schools*, NCREST, August 1991.

Mazmanian, Daniel and Paul Sabatier, *Effective Policy Implementation*, Lexington Books, Lexington MA, 1981.

McLoughlin, Milbrey, "The RAND Change Agent Study Revisited: Macro Perspectives and Micro Realities", *Education Researcher*, December 1990, pp. 11-16.

Mirel, Jeffrey, "School Reform Unplugged: The Bensenville New American School Project, 1991-93", *American Educational Research Journal*, Fall, Vol. 31, No. 3, pp.481-518.

New American School Development Corporation, *Designs for a New Generation of American Schools, A Request for Proposals*, Arlington Virginia, October 1991.

Policy Studies Associates, Inc., *School Reform for Youth At Risk: An Analysis of six Change Models*, Vol. I. Summary Analysis, U.S. Department of Education, 1994.